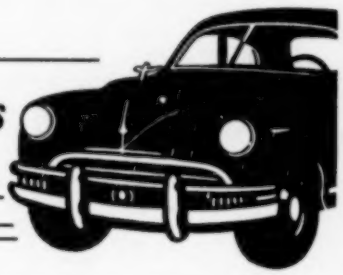
30 CENTS

Consumers' Research Bulletin

June 1953



Consumers' Research Bulletin

OFF THE EDITOR'S CHEST

WHEN the various committees of distinguished scientists who have been given the task of evaluating the tests made by the National Bureau of Standards on the battery "rejuvenator" *AD-X2* bring in their reports, we shall no doubt have a clearer picture of a scientific dispute that will be the talk of the century. The attempt of a salesman for a storage-battery "rejuvenator" to discredit the scientific findings, test methods, the prestige and integrity of the National Bureau of Standards by his aggressive techniques which relied chiefly on a large volume of testimonials is so audacious in concept and was so nearly successful that it will undoubtedly receive the attention of scientists and researchers for years to come.

Battery additives, consisting essentially of Epsom and Glauber's salts, have been the subject of study for more than a quarter of a century by the National Bureau of Standards. The product *AD-X2*, previously known as *Protecto-Charge*, put out by Pioneers, Incorporated, of which the president is one Jess M. Ritchie, was marketed in 1948.

For *AD-X2*, Ritchie decided to secure some scientific advice and engaged as consultant Dr. Merle Randall, a chemist who was then Emeritus Professor of Physical Chemistry of the University of California. In the spring of 1949, according to printed publicity for the product, Dr. Randall presented a paper before a meeting of the American Chemical Society in San Francisco concerning the chemical reactions in lead storage batteries and the prevention of sulfation of battery plates by the battery additive. It is interesting to note that the paper was not accepted for publication in the official journal of the American Chemical Society. (A paper which discusses a proprietary product without revealing its composition and measured properties is not acceptable for publication in the journals of professional and scientific societies.)

The fact that a chemist in a university position had delivered a paper on the subject of *AD-X2* by name before the American Chemical Society was widely circulated by Ritchie as indicating that some scientific respectability had been achieved by his particular Glauber's salt-Epsom salt battery preparation. Ritchie's major promotion technique was the use of a growing pile of testimonials, which in number must compare favorably with those for the venerable *Lydia E. Pink-*

(Continued on page 30)

JUNE 1953 VOL. 31 • NO. 6

Consumers' Research functions to provide unbiased information on goods bought by ultimate consumers. For their benefit (not for business or industry) and solely with the funds they provide, CR carries on tests and research on a wide variety of goods, materials, and appliances, and publishes the findings in CR Bulletin. Consumers' Research is a non-profit institution, and is organized and operates as a scientific, technical, and educational organization.

Scientific and Technical Staff and Editors: F. J. Schlink, R. Joyce, D. C. Aten, M. C. Phillips, Erma A. Hinek, F. X. Hinek, and A. R. Greenleaf. Editorial Assistants: Mary F. Roberts and B. Beam. Business Manager: C. D. Cornish.

Symbols used to indicate sources of data and bases of ratings: **A**—recommended on basis of quality; **AA**—regarded as worthy of highest recommendation; **B**—intermediate with respect to quality; **C**—not recommended on basis of quality; cr—information from Consumers' Research's own tests or investigations; **1, 2, 3**—relative prices, **1** being low, **3** high. Note that price and quality are completely differentiated in CR's listings; **a quality judgment is independent of price; 52, 53**—year in which test was made or information obtained or organized by the staff of Consumers' Research.

It will be advantageous if you will, whenever possible, send prompt notice of change of address at least 5 weeks before it is to take effect, accompanying your notice with statement of your old address with name in full. At least a month's notice must be given in any case. This rule, however, regarding long advance notice does not apply to military personnel. ¶*CR will, of course, gladly change addresses for men and women in the services as often as required by changes in station and other circumstances.*

CONSUMERS' RESEARCH BULLETIN, issued monthly by Consumers' Research, Inc. Editorial and Publication Offices at **Washington, N. J.**

Subscription price (12 issues), $3 per year, U.S.A.; Canada and foreign, $3.50. Single copy 30c. For libraries, schools, and colleges, a special subscription of nine monthly BULLETINS (October-June, inclusive) is available at $2; Canada and foreign, $2.50. ¶Responsibility for all specific statements of fact or opinion at any time made by Consumers' Research lies wholly with the technical director and staff of the organization. Entered as second-class matter November 9, 1934, at the Post Office at Washington, N.J., under the Act of March 3, 1879; additional entry at Easton, Pa.

●● Printed in U.S.A. ●● CONSUMERS' RESEARCH BULLETIN is on file in many school, college, and public libraries and is indexed in Industrial Arts Index and in the Readers' Guide to Periodical Literature. ●● *Microfilm copies* of complete volumes of CONSUMERS' RESEARCH BULLETIN can be purchased at $1.50 per volume (beginning with the 1949 volume). Orders for the microfilm edition, which is available only to regular subscribers to the monthly issues of CONSUMERS' RESEARCH BULLETIN, should be sent to University Microfilms, 313 North First St., Ann Arbor, Mich.

The Consumers' Observation Post

THE NEW VINYL PLASTIC FLOOR COVERINGS have a hard, bright finish, and their manufacturers claim that waxing is not necessary "to improve their appearance or protect them from excessive wear." According to one magazine, the manufacturers and distributors of floor waxes are considerably disturbed over the likelihood that, in the course of time, waxing floors may be discontinued altogether. As the journal points out, however, flooring that is customarily waxed, such as wood, rubber, tile, and linoleum, will continue to be in wide use for many years.

* * *

CAMERAS marked "Made in Soviet-Occupied Germany" will no doubt be seen in various stores, if the inquisitive consumer looks carefully for the country of origin label. The Customs Bureau has ruled that beginning June 4, 1953, all dutiable goods from East Germany shall be so marked. The principal cameras imported from East Germany are the Exakta, Exa, Primarflex, Master Reflex, Praktica, Praktiflex, Pentacon, Contax S, and Contax D. According to the New York Times, importers and dealers expect a sharp drop in sales of cameras of Eastern-Zone origin when the new labeling regulation becomes effective.

* * *

THAT OLD FAVORITE FOR MOTH PREVENTION TREATMENTS, paradichlorobenzene, has also been found effective in preventing mildew damage, under certain conditions (as was reported in CR's Bulletin for June 1951). Tests recently reported by R. S. Shumard of Monsanto Chemical Co., in Soap & Sanitary Chemicals, confirm CR's observations and indicate that this chemical in the proper concentration to produce a substantially saturated atmosphere not only provides protection against moth damage but prevents mildew as well. It is especially important to place the chemical in such position that the vapors can seep downward, for they are heavier than air and hence will not rise if placed in the bottom of a garment container, for example. Present investigation indicated that "para" is relatively harmless to wearing apparel, although it is not entirely certain that it can be safely used with some of the newer synthetics and plastics. Its vapors should not, however, be breathed any longer than necessary, and treated garments should be well aired, outdoors, before use.

* * *

SUIT CLUBS that were held last year to be subject to gambling taxes are now exempt. The Revenue Bureau, in a new ruling announced early this year, has reversed itself and has held that legitimate "merchandise clubs" are not subject to the federal taxes on gambling. On the subject of men's suits, it is worth noting that prices are expected to be at least $3 higher this fall owing to the pay boost granted the Amalgamated Clothing Workers Union this past spring.

* * *

REPELLENTS FOR MOSQUITOES, FLIES, GNATS, and other insects are now available that really help keep the bugs away, reports the U.S. Department of Agriculture. Look for the name of the chemical on the particular brand that you are planning to buy. Among the chemicals that the U.S.D.A. has found to be most effective are: dimethyl carbate, dimethyl phthalate, ethylhexanediol, and indalone. These substances have little odor and provide protection for several hours, although it should be kept in mind that they do not kill insects, but merely repel them. The commercial repellents containing these chemicals are most effective when rubbed on the skin and are considered safe by the U.S.D.A. except where there are skin abrasions or on sensitive spots, like the eyelids. They are best applied only sparingly to

the forehead. They may stain clothing and may damage rayon or nylon, plastics, paints, and fingernail lacquer.

* * *

THERE IS GROWING CRITICISM BY WOMEN of the difficulty they have in washing and ironing clothes made of many types of rayon (no doubt, acetate also), according to Charlotte Montgomery, of Tide magazine. Perhaps this is as good a reason as any to account for the pleased reports from the annual meeting of the American Cotton Manufacturers Institute that a greater percentage of men's sport shirts is being made of cotton, and there has been an increase generally in the use of cotton for casual and sports clothing.

* * *

EATING TOO MUCH OF SOME PARTICULAR FOOD has a tendency to produce sensitization that will make the consumer unhappy every time he partakes of the same food thereafter. Dr. Walter C. Alvarez, eminent allergy specialist, has pointed out in a letter to the Journal of the American Medical Association that people who have been known to drink a quart of milk a day with comfort have become too sensitized to milk to drink it at all after they have gone on a diet that called for three quarts a day. He notes that there are many cases in which a person's sensitization to some food dates from the day when he ate too much of that particular food.

* * *

FROZEN MEAT need not be thawed before cooking, but you must allow a longer time for cooking. Experts at the New Jersey Agricultural Experiment Station report that so far as flavor, texture, and general quality are concerned, it does not matter whether meat is allowed to thaw after being taken from the freezer, or is cooked frozen. It is, however, necessary to increase the cooking time for frozen meat by 5 to 25 minutes per pound, depending on the size of the piece of meat.

* * *

OVEREXPOSURE TO SUNLIGHT is customarily very damaging to the skin. For naval personnel, it is a real hazard. Writing in a medical journal, Dr. C. D. Bell and W. F. Mazzone describe continued exposure to the sun as making the skin thin, lax, without luster, and thickened on the back of the neck. Other effects may include small scaling patches which in time may develop into hard little papules. In order to prevent or mitigate the undesirable and sometimes dangerous effects of sunburn, the researchers recommend the use of a preparation that filters out the dangerous ultraviolet rays and point out that para-aminobenzoic acid accomplishes this purpose without preventing initial reddening or subsequent tanning of the skin. They note that the most effective form of the chemical is its sodium salt, used in commercial sunburn lotions.

* * *

CHLOROPHYLL has been tested by researchers at the University of Glasgow against a variety of odors including skunks, perspiration, chopped onions, and garlic. The investigators reported that they could find no deodorant properties whatever in the sodium and copper chlorophyllins, the essential basis of commercial chlorophyll preparations. On the subject of this report the British Medical Journal commented: "It is evident that the wave of credulity which has swept the United States has not overwhelmed everyone...."

* * *

THE ARTIFICIALLY HIGH PRICE OF BUTTER has boosted the sale of margarine to a figure of something like one and a third billion pounds, more than triple the amount sold in 1939. To complicate the position of the new Administration in Washington, D.C., there is a prior commitment to keep the price of butter at 90 percent of "parity" (that has been renewed for another year) which has brought it to something like 68 cents a pound wholesale. The price of margarine, now permitted to be colored yellow in all but five states, is around 30 cents a pound. In order to keep the price of butter up, the federal government has been obliged to take off the market what

(The continuation of this section is on page 35)

Studebaker Land Cruiser

Automobiles of 1953

Hudson Super-Jet

Comparative report on 48 cars by Consumers' Research

"WHEN is the best time of the year to purchase a new car?" is a question that confronts the average consumer who has about decided to turn in his present car. From a depreciation standpoint alone, it would appear (if there are no personal reasons for proceeding otherwise) that the new car should be purchased as soon as possible after it has become available; purchase at that time tends to make the depreciation per mile a minimum. For example, a 1952 model car purchased late in the model year, used for 3000 miles of driving, will have depreciated, when the 1953 models come out, just about as much as a similar 1952 model purchased early in that year and used for 12,000 miles. Thus, a person who purchased a car at its regular price only a month or so before the new models were announced, will have a car which will accumulate two years' loss in turn-in value or "depreciation," in a little over a year. This is an important consideration for those who turn their car in every year or so, and can easily result in a financial loss of $200[1] or more for a car in the *Ford-Chevrolet* bracket to $500 or more for a high-priced car.

On the other hand, there are many who prefer, and we think wisely, to wait several months after the new model is out before buying, so that the manufacturer will have had a chance to clear up any "bugs" or faults usually present in the first production of a new car. Taking everything into consideration, CR is of the opinion that May, June, July are probably the best months in which to purchase a new car. For those not concerned with the prestige of owning the latest model, who intend to keep the car for several years (say 4 or 5 years at least), consider-

[1]This assumes that there are no large increases or decreases in retail prices of new cars of the given make from year to year (normally such changes are not to be expected).

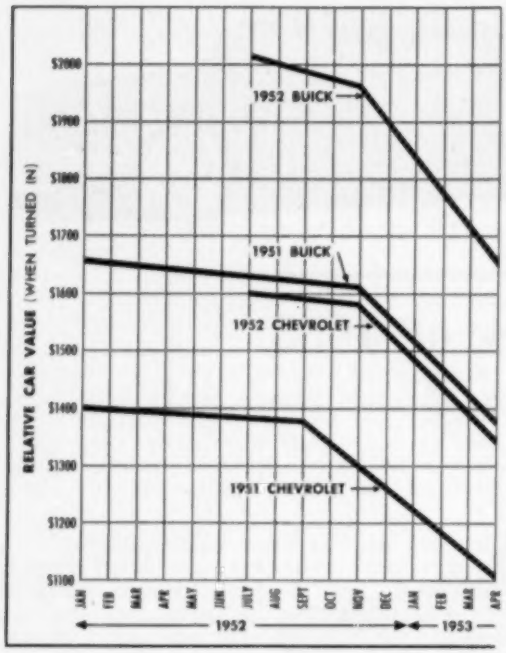


Figure 1

This graph shows the "book values" of 1951 and 1952 Chevrolets and Buicks each month from January 1952 to April 1953. It will be noted that the turn-in value begins to drop rapidly around September and October, two or three months prior to the introduction of the new models. Thus, in order to get the most money for the car being turned in, the trade should be made before the months named.

able money can be saved by waiting until the new models are available, then purchasing a brand new car of the previous year from a dealer who has a considerable number of such cars on hand which he may sell at a reduced price to get back his investment.

The American consumer has been conditioned by forceful persuasive advertising to be a ready prospect for anything that seems to be new and different. This is done by making his present equipment, whether it be a car or refrigerator, appear to be obsolete, and generally inefficient and outmoded. In the automobile field, designers have done this by making the current models look enough different from last year's models to be noticeable; nevertheless, real improvements, most needed in matters of safety, ease of entering and leaving a car, improved gasoline economy (except for *Cadillac*) are almost invariably neglected.

The resurrection of wire wheels and locating the spare tire out in the open in the place it occupied many years ago, may be an indication that sales managers are really having to cast about for new ideas to help them sell. It is to be hoped that, in view of the alarming highway death rate, designers will forget their urge for higher horsepower (to be discussed more fully later in this article) and "gadgeteering," and direct their energies toward providing safer and saner designs for automobiles, designs that will *not* be quickly outmoded or prove to be duds, and will favor safe driving and convenient servicing.

Beyond *Hudson's* entry into the lower-priced field, *Studebaker* with its "Continental style" bodies, new V-8 engines in some makes, and increased use of power steering, there appears to be nothing in the 1953 crop of automobiles for any consumer to get excited about. On the other hand, those who are carried away by new arrangement of chrome-plated strips, by hoods and fenders that block the view of the road close to the car, and the like, will find the usual annual allure is present for the new-car buyer, as heretofore.

Engines

Leading the field in the horsepower race is *Cadillac* with a rated brake horsepower of 210, followed by *Lincoln* with 205, *Buick Roadmaster* with 188, and *Chrysler V-8* and *Packard* with 180. In the medium price group, the horsepowers range from *Willys* with 90 horsepower to *Buick Super Dynaflow* with 170. In the lower price ranges, the lowest horsepower is in the *Henry J* with 68, and the highest, *Pontiac 8*, with 118.

This race for engines of higher and higher horsepower should be viewed with grave concern by motorists, for it is bound to lead to an ever-increasing number of highway accidents and fatalities. Some will be heard to argue that in the hands of capable drivers, cars with 180 and 210 horsepower engines will increase safety, in that the rapid acceleration provided by these high-powered engines will enable drivers of such cars to get out of tight spots, in passing a car or truck. Overlooked, however, is the fact that few drivers are capable of handling cars of such high horsepower, for there are many drivers who will push the accelerator to the floor, regardless of the speed limit, when the highway police are not in evidence or expected, and regardless of the great hazard which is always increased by anything that tends to favor higher speed. Driving at excessive speed—as the public knows from its own experience—is by far the most important cause of casualties on the road, and does in fact account for about 60 percent more deaths and injuries than the next greatest haz-

ard of the road (which is not having the right of way). Excessive speed alone accounts for about 14,000 deaths and 600,000 injuries a year. Furthermore, the speed limit in most states is around 50 miles per hour, a speed which even a car of low horsepower can reach quickly and easily maintain. Most of the highways in the country were not built for higher speeds; even the new super-highways in New Jersey and Pennsylvania have maximum speeds of 60 and 70, respectively, which are reduced to as low as 35 m.p.h. or less, when weather conditions are bad. Thus the only advantage these high horsepower cars will have is in improved acceleration and in the sense of power they afford the driver. The high acceleration itself can be considered a doubtful advantage, considering the high cost of achieving it, and it will encourage many drivers to take dangerous chances in passing other cars and trucks. *The automobile industry will do well to take immediate steps to limit the maximum horsepower of passenger cars and trucks*, before some of the state governments are impelled to step in, in the interest of public safety, and do the regulating by law.

Some increase in horsepower is perhaps justified to take care of the extra load placed on the engine by such devices as automatic transmissions, power steering, power brakes, and air conditioning, but the recent horsepower increases on a number of cars are a good deal greater than are warranted by any valid considerations.

12-Volt Electrical Systems

With the ever-increasing electrical load on modern cars, stepped up approximately three times in the past 25 years, design engineers have turned to 12-volt systems as a solution for some of their difficulties. In cars with high compression ratios, the 6-volt system did not provide adequate voltage for ignition, or high enough cranking speed for the starter, with today's big engines. Twelve-volt systems should correct these difficulties without any very great increase in the size of the battery or generator.

A 12-volt, 70-ampere-hour battery has almost 30 percent greater energy-storage capacity than a 6-volt, 110-ampere-hour battery and should have about the same life as a 6-volt battery of comparable quality. The main disadvantage of the 12-volt system is its effect on lighting. To provide the same light output, the wire in the lamp must be greatly reduced in cross-sectional area, and its length increased. These changes both make the lamp filaments more fragile and less resistant to vibration, and the lighting efficiency is not quite as good as with 6-volt bulbs. Actually, 12-volt systems are not new, but a revival of an old practice, for they were used many years ago on such cars as the *Locomobile*, *Stearns*, and *Dodge*, and are in almost universal use on European cars.

Automatic Transmissions

According to the trade press, the various self-acting transmissions are gaining steadily increasing popularity, but it is a debatable point, whether this is because the public really wants automatic transmissions or because the manufacturers are equipping more of their cars with them and are relying on their salesmen to convince the consumer that this complicated and expensive device is really necessary and in every way advantageous. The British have not gone overboard for automatic transmissions, for several reasons. As pointed out by one of their trade magazines, Autocar, European engines are small, and the power losses in automatic transmissions (about 10 percent) have a much more noticeable effect than with American engines, in which the "sky seems to be the limit of engine size and power." Further, automatic transmissions cannot meet all requirements of certain road conditions, such as long mountain passes, where performance and safety of the automatic mechanism cannot compete with the sure, time-tried action of intelligently driven cars with standard transmission.

The point has been made, too, that automatic transmissions enable a number of drivers to obtain licenses who are unable to cope with the gear-shift lever and clutch, and that such inexperienced drivers may well increase road hazards for themselves and others. *Hydra-Matic* is now the most widely used automatic transmission; it is available on *Cadillac*, *Hudson*, *Kaiser*, *Lincoln*, *Nash*, *Oldsmobile*, and *Pontiac*. On the *Oldsmobile*, the quadrant showing the range in which the transmission is operating has been moved from the wheel post to the instrument panel and is operated electrically. While this enables the driver to see at a glance, at night, that he is in the desired range, it appears to be a needless complication to an already complex mechanism and is considered not as reliable as the former simple mechanical arrangement. On one car tested, the indicator was out of adjustment and pointed to the "Super-Drive" position when the transmission was actually in the "Low" range.

The most significant improvement this year is modifications in the design of the *Powerglide* transmission used on the *Chevrolet*. The changes

consist of a larger, more efficient, 3-element torque converter and an automatically-selected low ratio (1.82 to 1) in the drive range. When the car starts from rest in the drive position, the transmission is in the low ratio and changes to direct drive (1 to 1 ratio) at car speeds of from 10 to 40 m.p.h., depending upon the position of the accelerator pedal. The driver can also "kick down" from direct drive to the lower ratio (at speeds up to about 40 m.p.h.) by depressing the accelerator pedal fully. The result has been an improvement in acceleration in the range from a standing start to speeds up to about 45 m.p.h.

The *Dynaflow* as used on *Buick* has also been improved by the use of a more efficient four-element twin-turbine torque converter. The first part of the unit, which has a planetary gear set, in starting provides a maximum torque multiplication of 2.45 to 1. As the speed increases, the planetary gears become freewheeling, and the load is taken up by the second part of the unit. This replaces the previous five-element type in which fluid-torque action alone without the use of gears provided step-up of engine torque.

The *Fordomatic* and Packard's *Ultramatic* transmissions remain essentially the same as last year. Both are satisfactory transmissions.

The *Chrysler* semiautomatic transmission is available with or without a torque converter. The addition of the torque converter provides improved performance in starting from rest and on hills where the increased torque available makes it less often necessary to "kick down" to third gear. The clutch pedal must be used in changing from the driving range to the low range or to reverse. In the driving range, the change from third to fourth gear is made without use of the clutch, by lifting the foot from the accelerator pedal until, after a brief time lapse, the change is automatically made to fourth gear. The *Chrysler* transmissions are considered the least desirable of all the currently available types; they are also, with the *Fluid-Torque* feature, one of the most expensive. *Plymouth* has announced a less expensive version of the *Chrysler* transmission. This, however, has not yet been tested by CR. *Studebaker* has some desirable features not found in any other automatic transmissions: a "no-creep" device which prevents forward movement of the car from rest (without calling for use of the brake), a hill-holding device to prevent the car from rolling back on a hill (also not calling for use of the brake or the feeding of additional gas), and a device to prevent damage to the transmission should the selector lever be accidently moved into the "Park" position while the car is in motion.

Overdrive

For those who make a lot of short trips around town or drive in hilly country or on bad roads where the overdrive may be locked out a large part of the time, the overdrive will not be a desirable purchase. It can be a good investment from the standpoint of economy, in parts of the country where the terrain is relatively flat and where driving can be done at fairly high speeds for a large proportion of the time. Advantages are reduced engine speeds, quieter operation, better acceleration in third gear because of the higher numerical rear axle ratio used with overdrive. (Claims for reduced engine wear should not be given great weight; rate of wear is not, of course, solely determined by engine speed.) The disadvantage of overdrive, especially significant on steep or winding hills in winter, is that with it the car "freewheels" below about 25 m.p.h., creating a hazard because under such conditions there is no braking effect from the engine. Getting out of overdrive sometimes presents a problem, too, on a steep or dangerous hill.

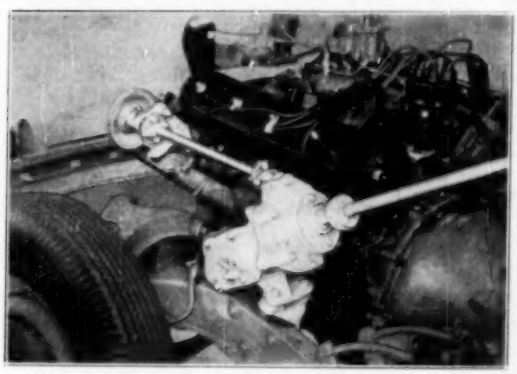
Power Steering

Power steering is still an expensive luxury, amounting to an extra $200 above the regular price of a car in some instances; it is now available for several different makes of cars, and would appear to be well on its way to attaining a popularity secondary only to automatic transmissions. It would have particular value as an aid in parking, which has become more difficult with heavier cars and large, low-pressure tires. It would also be helpful on winding, hilly roads (such as are common in West Virginia and other very hilly states), and also gives better control of a car in case of blowout.

In general, there are three different designs available, two in which hydraulic means are employed for operation, and one (*Studebaker*) which uses gears driven by the engine through a V-belt drive. While all are intended to reduce the effort required by the driver when turning the steering wheel of a car, the hydraulic power-assist-steering arrangement available on all General Motors' cars from the *Chevrolet* to the *Cadillac* does not have an appreciable effect until after a relatively small effort has been exerted by the driver. Thus, the reduction in steering effort will be most noticed when one parks or takes a quick turn. General Motors have not reduced the steering ratio appreciably on cars equipped with power steering so that it is still necessary to turn the steering wheel several revolutions when turning from full right to full

left on most GM cars; in parking, for instance, it is only the amount of force required to be applied to the wheel by the driver that is materially reduced.

Power-assisted steering as adopted by Chrysler on their complete line (except *Dodge* and *Plymouth*) is also hydraulically operated. It differs from the General Motors system, however, in several respects. Since it assists the driver at all times and is not dependent upon the force he exerts, it reduces considerably the "road feel" normally transmitted to the driver through the steering wheel. On *Chrysler* cars equipped with power steering, the steering ratio used is much less than that used on similar cars not so equipped, and when parking, for example, much less movement of the steering wheel is needed than with the General Motors system, for a corresponding movement of the front wheels of the car.



Studebaker's mechanical-power-steering unit.

The power-steering system introduced for use on the *Studebaker Commander* and *Land Cruiser* Series and to be made available later on this year for use on the *Champion* Series is mechanically actuated but functions in a manner similar to the General Motors unit in that it does not actually assist the driver until a certain minimum pull — about 2 pounds — has been exerted at the steering wheel.

The *Bendix* system, available for use on all *Packard* cars, is also similar in operation to the General Motors unit, except that in the Packard system the power is applied between the steering linkage and the pitman arm, and in the General Motors unit the power is applied between the steering wheel and the pitman arm. While CR engineers have not driven a *Packard* with power-assisted steering, it is said that the *Bendix* system does transmit road reaction or "feel" to the driver; this we consider a definite advantage, which is present only to some extent in the General Motors system but not nearly so evident in the Chrysler, as noted previously. A unit having similar characteristics is also available for the *Lincoln*.

All of the power-steering systems are designed to permit normal mechanical steering should the power-steering mechanism fail.

The "Autronic Eye"

This device, available as optional equipment on General Motors' cars, consists of a photo-electric cell connected to switches to dim the headlights of the car on which it is installed, when the headlight beam of any oncoming car strikes the light-sensitive cell; it has some merit. It will not, however, solve the problem of glaring headlights unless an equivalent device is installed on the great majority of cars—which is not likely to happen at its present price ($50)—or unless laws and regulations are adopted by the various states which will make use of this or some equivalent device mandatory, a development which does not seem at all likely.

The *Autronic Eye* device had the disadvantage that it was not selective, and it dimmed the headlights when it was not necessary or desirable, for example, when it picked up light from street lamps, bright roadside signs, etc. The driver, however, could prevent the headlights from dimming in such circumstances by holding a special floor button down with his foot (the usual floor button for switching the lights to the passing beam was also present).

This additional control may be a necessity, at least in the present stage of development of the *Autronic Eye*, but it adds one more thing to divert the driver's attention which is, of course, undesirable. It may therefore be no net gain to the driver in thickly settled and urban country, and may add enough to the problems of the driver in lighted areas to increase rather than decrease the problem of driving.

Tinted Glass

The tinted glass now available on most cars as extra equipment is *not* in CR's opinion a desirable addition to an automobile, because it reduces visibility of objects when one is driving at night. Glaring headlights of oncoming cars are considered to be one of the most dangerous incidents of night driving, especially in bad

weather or when the road is narrow or its surface unfavorable. If the light-transmitting qualities of the windshield glass should be reduced sufficiently to decrease effectively the glare from automobile headlights at night, the effect would be to reduce the degree of visibility of objects and obstacles along the highway; thus the visibilities of *all* objects which are only dimly visible at night would be reduced still further and many objects would thus be brought below the threshold of perception. It must be borne in mind that many accidents are caused by a deficiency in visibility which may be very slight.

The president of the New York Optometric Association has stated that any benefit derived during sunlight hours (from tinted glass windshields) is defeated because of interference with vision at night.

One unforeseen disadvantage of tinted windshields is that they are anathema to owners of drive-in theaters, because they impair the quality of black and white pictures, make Technicolor unrecognizable, and render useless the Polaroid glasses used for viewing one type of three-dimensional movies.

Keys

The question as to whether a single key, two keys, or three keys is the most desirable for an automobile has been a topic of great interest to some readers, who have expressed their disagreement with a statement in the BULLETIN to the effect that, as a matter of convenience, we considered a single key for all locks on a car as much to be preferred over multiple keys. Those who objected claimed that two keys were essential, one for doors and ignition, and one for the trunk and glove compartment, because a single key meant that in garages and parking lots, where the ignition key had to be left with the attendant, the single key would give access to the glove compartment and trunk, and might result in loss of valuable articles.

With the single key, however, it is *not* necessary to leave the key in the ignition switch for the garage or parking lot attendant. The trunk and glove compartment can be locked, the key *removed from the ignition* and kept in the possession of the owner, for if the key is removed after turning the ignition key to the *unlocked* "off" position, the ignition can be turned on and off without the key.

Many parking lots close fairly early, and thus if an ignition key is left in the car which is still on the lot there is an obvious temptation to a car thief. With cars using a single key which the owner has retained, the attendant, on leaving, can lock all the doors without a key,[3] leaving the car accessible to the owner, and at the same time much safer from theft than other cars which must be left unlocked and with the ignition key accessible, in its "standard place" under the mat or in the glove compartment. The single key also eliminates irritating fumbling to find the right key for the right lock, especially at night.

The only disadvantage of the single key is that the key can be removed from the lock with the ignition on; thus there is a possibility of leaving the car, if the engine has died without being shut off, with the ignition on, and so running down the battery. With the two-key system, the ignition key can be removed only when the key is in the off position.

Whether you prefer a one-key system or a two-key system — both have their advantages — it is always advisable to carry a spare key or set of keys on one's person, perhaps in the money wallet, secured with adhesive tape against falling out, or in a change pocket, for the American Automobile Association reports that in 1952 over 400,000 of their drivers lost their keys or locked themselves out of their cars.

Yellow Headlights, and Tinted Glasses

Many people suppose that substitution of yellow lenses for the clear lenses now used in automobile headlights would considerably reduce the driving hazard now present at night due to glare from the lights of an oncoming automobile. While such a practice is imposed by law in France, CR points out that it has been proved by measurements of visibility (as well as fog-penetration) that yellow light does not penetrate fog better than white light, and has no significant value as compared with the original color of light from the lamp filament. *Yellow lenses merely dim the light.* Reducing the glare by 40% while reducing the road illumination by the same amount does not remove the hazard, but may increase it, particularly where driving is at high speeds. (See article on fog lamps in CR's March 1953 BULLETIN.) Fog lamps, if installed, should have white lenses and be *below* the head lamps.

Do not use tinted eyeglasses with the idea of improving visibility in daytime driving; their

[3] On 4-door sedans, the rear doors and one of the front doors are locked from the inside by depressing the small upright rod or button on the window moulding of each door. The other front door is then locked by depressing its own button when the door is open, then closing the door while pushing in the plunger on the outside door handle.

use at night, with the intent to reduce headlight glare, is positively dangerous.

Additional Automobile Listings

A–

This Nash should prove to be a good family car for those who want comfortable and economical transportation. Performance was adequate but not outstanding. Depreciation (loss of value on turn-in) is, however, likely to be high for a Nash unless it is turned in on another car of the same make.

Nash Statesman Super. $2270 delivered N.Y.C. Heater and defroster, $67; overdrive, $104; bed and reclining seats, $18.50.

CR'S FINDINGS ON ROAD TESTS

Speedometer errors: at indicated speed of 20 m.p.h., actual speed was 19.5 m.p.h.; at 35 m.p.h., 33; at 50 m.p.h., 47; at 60 m.p.h., 56. **Odometer** was inaccurate about 4% (100 miles would be recorded as 104).

Acceleration time (with 4.9 to 1 rear axle ratio) from 20 to 50 m.p.h., 12.9 sec. (average); from 40 to 60 m.p.h., 10.2 sec. (average).

Gasoline mileage under test conditions[3] was good: at 30 m.p.h., 26.7 m.p.g. in overdrive, 21.7 m.p.g. in third gear; at 50 m.p.h., 20.0 m.p.g. in overdrive, 16.7 m.p.g. in third gear.

Riding comfort was very good on all types of roads. Cornering ability on curves at moderate speed was good.

OBSERVATIONS AND CONCLUSIONS

The car tested was equipped with overdrive. Interior space was adequate. Visibility ahead of the car was excellent due to the low hood, but rather high fenders gave impression car had great width, which was somewhat disconcerting at first, and some, who drive by the left fender, found it hard to keep car away from center line of road on narrow roads. Steering factor, 4.0, about normal, but turning radius rather large. Bad reflection on windshield in daylight from chrome strip along top of dash; gave no trouble at night. Location of horn ring should be improved to prevent its being operated accidentally by contact with the knee. Speedometer also was badly located, being partly obscured by the steering wheel and not directly below the line of sight of the driver. No stops on doors to hold them open, a disadvantage. Spare tire was located in horizontal position in well in trunk floor, requiring removal of contents of trunk to take out tire. Starter located under clutch pedal, satisfactory, but driver had to learn not to depress clutch pedal fully when the engine was running. Brakes were satisfactory (stopping distance at 50 m.p.h., 141 ft.).

[3] These are not the same figures as miles per gallon under average road conditions; however, the 50 m.p.h. figure for gasoline consumption, if multiplied by 0.8 or 0.9, will often be close to that obtained in normal driving.

A–

The Oldsmobile 98 is considered a well built car. With the Hydra-Matic transmission, it would be preferred for general driving purposes to the DeSoto V8 with "Fluid-Torque" drive.

Oldsmobile 98. $2897 delivered N.Y.C. Radio, $130; heater and defroster, $80; *Hydra-Matic* drive, $178; power steering, $175; power brakes, $33.

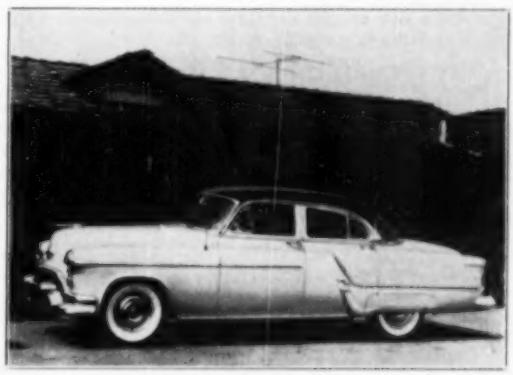
CR'S FINDINGS ON ROAD TESTS

Speedometer errors: at indicated speed of 20 m.p.h., actual speed was 19.7 m.p.h.; at 35 m.p.h., 34; at 50 m.p.h., 47.5; at 60 m.p.h., 55.4. **Odometer** was inaccurate by about 3% (100 miles would be recorded as 103 miles).

Acceleration time from 0 to 30 m.p.h., 5.3 sec. (good); from 20 to 50 m.p.h., 10.5 sec. (good); from 40 to 60 m.p.h., 8.7 sec. (good).

Gasoline mileage under test conditions[3] was about normal: at 30 m.p.h., 19.5 m.p.g.; at 50 m.p.h., 17.2 m.p.g., essentially the same as last year's model.

Riding comfort was good on rough roads at both low and moderate speeds. Ability of the car to hold the road at high speeds in taking a curve was also good.



Oldsmobile 98

OBSERVATIONS AND CONCLUSIONS

The car tested was equipped with *Hydra-Matic* drive, power steering, and power brakes. Interior space was adequate and headroom was ample. Steering factor, 6.3, exceptionally high, for a car with power steering. This was particularly noticeable on a sharp turn at moderate car speeds when a large angle of turn of the steering wheel was required to negotiate the turn; response to the steering wheel, however, was definite (precise). The power brakes worked very well, and were relatively low in cost as an extra ($33); they were judged desirable from the standpoint of convenience and safety, especially for a woman driver or a person of less than average physical strength. Noise level of the engine was low, as was wind noise with windows closed. The *Hydra-*

Matic selector lever could be moved into reverse without lifting the shift lever, which could be dangerous (no safety lock provided). The selector lever is located in the customary position on the steering post, but the quadrant showing the range in which the transmission is operating has been placed on the instrument panel, and is operated electrically. This is a needless complication applied to an already complex mechanism, and is not considered as reliable as the former mechanical arrangement; indeed, on the car tested, the indicator pointed to "Super-Drive" position when the transmission was actually in the "Low" range. Interior appointments and upholstery were considered good. Engine required use of high-test gasoline.

B+

This Hudson entry into the lower-priced field is an entirely new car upon which definite conclusions cannot be reached until some experience on the road has been accumulated. Present indications are that, if the leg room for the rear seat passengers could be increased by about 5 inches, it could, at a somewhat lower price ($100-$200), provide stiff competition for Ford, Chevrolet, and Plymouth. It has good roadability, a sturdy chassis, adequate performance, and good gasoline economy.

Hudson Super-Jet. $2019 delivered N.Y.C. Radio, $100; heater and defroster, $73; overdrive, $103; *Hydra-Matic* drive, $176.

CR'S FINDINGS ON ROAD TESTS

Speedometer errors: at indicated speed of 20 m.p.h., actual speed was 18 m.p.h.; at 35 m.p.h., 31.2; at 50 m.p.h., 44.8; at 60 m.p.h., 53.8. **Odometer** was inaccurate by about 3% (100 miles would be recorded as 103 miles).

Acceleration time from 0 to 30 m.p.h., 5.4 sec. (good); from 20 to 50 m.p.h., 10.7 sec. (good); from 40 to 60 m.p.h., 10.6 sec. (average). (Acceleration figures were obtained on a car with 3.54 to 1 rear axle ratio and *Hydra-Matic* transmission.)

Gasoline mileage under test conditions:[3] at 30 m.p.h., 25 m.p.g.; at 50 m.p.h., 20.2 m.p.g.; both good.

Riding comfort was good under all conditions, as was the ability to take curves at moderate speeds.

OBSERVATIONS AND CONCLUSIONS

The car tested was equipped with *Hydra-Matic* drive which operated smoothly with no objectionable lurch, sometimes present in the action of hydraulic transmissions. Interior space in front was very good, but headroom in rear was just sufficient for a person of average height wearing a hat. Leg room for rear seat passengers was considered inadequate. Steering factor, 4.1 (good). Trunk space was only fair. Car had excellent handling qualities; steering was positive and precise, and considered the best in the lower price group, better, in fact, than some of the higher-priced cars equipped with power steering. Turning diameter, 35 ft. (very good). Service brakes operated satisfactorily, but mechanical reserve braking, a desirable feature of other *Hudson* models, was not used. A well constructed car whose only disadvantage noticeable at this time is lack of adequate leg room in the rear.

B+

The Lincoln Capri is considered a good car but not as desirable as the Cadillac 62, in view of the Cadillac's very good fuel economy.

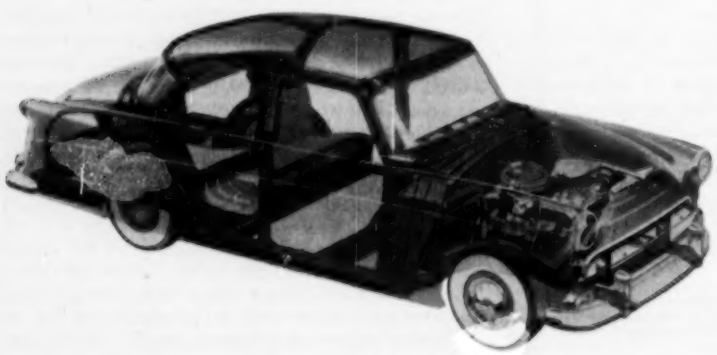
Lincoln Capri Hard Top. $3978 delivered N.Y.C. (4-door sedan, $3875). *Hydra-Matic* drive is standard equipment. Heater and defroster, $121; radio, $132; power brakes, $43; power steering, $199; 4-way seat and electric window lifts, $178.

CR'S FINDINGS ON ROAD TESTS

Speedometer errors: at indicated speed of 20 m.p.h., actual speed was 18.9 m.p.h.; at 35 m.p.h., 33.3; at 50 m.p.h., 46; at 60 m.p.h., 54.5. **Odometer** was inaccurate by about 3% (100 miles would be recorded as 103).

Acceleration time from 0 to 30 m.p.h., 5.1 sec.; from 20 to 50 m.p.h., 10.1 sec.; from 40 to 60 m.p.h., 9.0 sec. While the acceleration figures were good, they were not as good as might be expected with an engine of such high horsepower.

Gasoline mileage under test conditions:[3] at 30 m.p.h., 20 m.p.g.; at 50 m.p.h., 16.3 m.p.g. (far below *Cadillac 62*).



Hudson's one-unit body-and-frame.

Picture at left shows cramped leg room in the rear of the Hudson Jet. At the right, a full-size car in the low-priced range, with adequate leg room.

Riding comfort was good under all conditions; car handled very easily, and cornering ability was very good.

OBSERVATIONS AND CONCLUSIONS

Braking action with power brakes was very good, although no better than the *Cadillac* without power brakes. Engine noise level was low. Engine developed a slight intermittent miss during the test. Steering factor, 3.4 (satisfactory with power steering). Interior headroom and leg room were ample. Turning diameter, 45 ft. 10 in., very high (undesirable). In general, the quality of construction, upholstery, and hardware were first class and considered to be equal to the *Cadillac 62*. The electrically powered adjustable front seat, available as an extra, was not considered a worth-while feature.

B+

This Nash might be a desirable purchase for those who require and can afford a second car. Its good gasoline economy and ease of parking make it well suited for shopping, and suburban and short-trip driving.

Nash Rambler Country Club (a two-door hard top). $2125 delivered N.Y.C. Radio and heater standard equipment; overdrive, $103.50; *Hydra-Matic* transmission, $179.

CR'S FINDINGS ON ROAD TESTS

Speedometer errors: at indicated speed of 20 m.p.h., actual speed was 17.8 m.p.h.; at 35 m.p.h., 31.7; at 50 m.p.h., 46.3; at 60 m.p.h., 55.8. **Odometer** was inaccurate by about 3% (100 miles would be recorded as 103 miles).

Acceleration time from 20 to 50 m.p.h., 13.3 sec.; from 40 to 60 m.p.h., 13.2 sec.; both below average. Note that above times were obtained in third gear with 4.38 to 1 rear axle ratio, and car was equipped with overdrive.

Gasoline mileage under test conditions[3] was very good: at 30 m.p.h., 24.9 m.p.g. in third gear, 30 m.p.g. in overdrive; at 50 m.p.h., 19.0 m.p.g. in third gear, 25.4 m.p.g. in overdrive.

Riding comfort was excellent on smooth roads, very good on rough roads at moderate speeds, but at low speeds on rough roads some pitching was noticeable. Stability on curves was very good.

OBSERVATIONS AND CONCLUSIONS

Steering factor, 2.9 (very low), providing fast steering, but the steering was not precise and car had some tendency to wander. Engine noise level was moderate to high, even when operating in overdrive; this may have been partly due to insufficient sound-insulation. Rigidity of body and chassis was considered to be below average; some body creaks were noticeable on rough roads. Interior space was inadequate, particularly in lack of leg room in the rear. Location of operating pedals was such that convenient and safe operation would be seriously impaired with three passengers in front seat.

B+

In general, this car, with its probably high depreciation, is not considered as desirable a purchase for most consumers as some of the other cars in its price class.

Studebaker Regal Commander. $2291 delivered N.Y.C. Automatic transmission, $243; heater and defroster, $66.

CR'S FINDINGS ON ROAD TESTS

Speedometer errors: at indicated speed of 20 m.p.h. and 35 m.p.h., approximately correct; at indicated speed of 50 m.p.h., actual speed was 48 m.p.h.; at 60 m.p.h., 57.5. **Odometer** was approximately correct.

Acceleration time from 0 to 30 m.p.h., 7.7 sec. (average); from 20 to 50 m.p.h., 10.0 sec. (good); from 40 to 60 m.p.h., 9.6 sec. (good).

Gasoline mileage under test conditions:[3] at 30 m.p.h., 22.2 m.p.g.; at 50 m.p.h., 19.1 m.p.g. (good, but not as good as *Cadillac 62* whose rated engine horsepower is 75% higher!).

Riding comfort was good, and cornering ability was good.

OBSERVATIONS AND CONCLUSIONS

This car, which is advertised as the new American car with the European look, has a pleasing appearance. It is somewhat low (about 2 in. lower in overall height than *Chevrolet*), but headroom was adequate. Steering wheel is located too far forward for the average driver. Location of instruments is considered poor, as driver must look in a direction considerably below his average line of sight. Brake pedal located too far to the left, which might be hazardous in an emergency. There was a highly objectionable loss of "pedal reserve" when brakes were applied for a rather long time, as in down-hill braking. Visibility of the road ahead was excellent; both front fenders were visible to driver. Steering factor, 6.00, very high, and steering was not precise. Car had a tendency to wander, and was somewhat difficult to control in cross winds. Engine and transmission noise were both quite high. Automatic transmission, which is one of the most expensive, was not smooth in operation, and was not considered to be as desirable as other fully automatic transmissions. Right rear door was poorly fitted, permitting infiltration of cold air. Interior hardware was fair; upholstery, excellent.

B+

This Willys may appeal to those primarily interested in gasoline economy, particularly when the car is equipped with overdrive. The Aero Eagle was considered somewhat inferior, in general, to Chevrolet, Ford, and Plymouth, but somewhat more desirable than the Nash Rambler.

Willys Aero Eagle (a 2-door hard top). $2210 delivered N.Y.C. Radio, $77; heater and defroster, $68; overdrive, $87.

CR'S FINDINGS ON ROAD TESTS

Speedometer errors: at indicated speed of 20 m.p.h., actual speed was 18.9 m.p.h.; at 35 m.p.h., 32.6; at 50 m.p.h., 46.4; at 60 m.p.h., 55.8. **Odometer** was in error by about 2% (100 miles would be recorded as 102 miles).

Acceleration time from 20 to 50 m.p.h., 14 sec. (below average); from 40 to 60 m.p.h., 11.2 sec. (average). Note that above figures were obtained in third gear with car having 4.56 to 1 rear axle ratio, and overdrive.

Gasoline mileage under test conditions[3] was very good: at 30 m.p.h., 26.8 m.p.g. (30.9 m.p.g. in overdrive); at 50 m.p.h., 20.7 m.p.g. (24.5 m.p.g. in overdrive). **Riding comfort** was satisfactory on good roads, only fair on rough roads. The judgment of the observers was that the car would be rather tiring to both the driver and rear-seat passengers when operated for a considerable distance on rough roads.

OBSERVATIONS AND CONCLUSIONS

Steering factor, 4.3 (satisfactory), but steering was not as precise as on some cars tested. Turning diameter, 38 ft. (good). Noise level of the engine, even in overdrive, was high, and annoying vibrations were present in rear compartment floor panel. Although compression ratio is high, the use of premium gasoline is not necessary. Brake pedal pressure was excessive; the average woman driver would probably find it difficult to stop this car quickly under emergency conditions. Interior appointments and upholstery were satisfactory, but not up to the standard set by other cars in the price class.

Explanation of Listings in Table

The cars reported are, unless otherwise noted, 4-door sedans with standard equipment. In some cases where automatic transmissions were available as extra equipment, the cars with automatic transmission have also been included.

Brake Factor is a number indicative of the probable relative life of brake linings; a high brake factor is important from the standpoint of safety in use of the car, and probable low cost of brake maintenance. Cars with automatic transmissions require brakes that have a longer life built into them (with less need for frequent adjustment), than cars with standard gear shifts, because the reduced amount of engine braking available with automatic transmissions puts an extra burden on brakes and tends to wear out brake linings sooner. (Overdrive, with freewheeling, also imposes an extra burden on brakes.) The brake factor figures are obtained by dividing the total area of the brake linings in square inches by the shipping weight of the car plus the weight of five passengers at 150 lb. each, or 750 lb. (600 lb. for the *Nash Rambler*), and multiplying by 1000 (to avoid fractional numbers).

Engine Revolutions per Mile is considered to give a rough relative measure of the probable or expected rate of engine wear, when other conditions are equal.

Estimated Depreciation is based on the difference between the original New York City price of the most nearly comparable 1952 car and the turn-in value of that car as given in the Official Used Car Guide for February 1953, published by the National Automobile Dealers Used Car Guide Co., 1026 17 St., N.W., Washington 6, D.C. The estimates of depreciation, *low, medium, high, very high*, are indications of *relative* depreciation of the various cars under normal conditions. (They are based on numerical averages for 19 states east of the Mississippi River but, as relative terms, will apply generally throughout the country.)

Steering Factor is believed to be a more accurate method of expressing the properties of the steering mechanism than the "steering gear ratio" often given. The steering factor is obtained by multiplying the number of turns of the steering

wheel to turn the front car wheels from full right to full left by the length of the wheelbase in inches, and dividing the product by 100 times the angle turned by the car wheels in radians. A number that is too high is undesirable from a safety standpoint (slow steering response); a low number (except in the case of cars with power-assisted steering) would indicate hard steering at low speeds and relatively great physical effort required of the driver in parking.

Maximum Brake Horsepower at stated revolutions per minute is the figure claimed by the manufacturer. The actual maximum brake horsepower delivered to the rear axle will be considerably less, as manufacturers' brake horsepower figures are nearly always based on performance of the "bare engine."

Acceleration tests are made by approaching the starting line, in high gear, at each of two constant speeds, one of 20 and one of 40 m.p.h., then immediately pressing the accelerator pedal to the floor. In cars with standard transmissions, no changing of gears is involved. The ranges 20 to 50 m.p.h. and 40 to 60 m.p.h. have been selected to give an indication of the ability of the particular car to pass another slower-moving car or truck on the road. On most of the cars with automatic transmissions, acceleration tests were also made in the 0 to 30 m.p.h. range.

Miles-per-gallon figures were obtained with a standard m.p.g. tester on a level road at 50 m.p.h. The m.p.g. obtained in normal country driving, which will include some stopping and starting, and acceleration, should, as a rule, be between 0.8 and 0.9 of these figures.

Miles-per-gallon figures are also given as obtained in the Mobile Gas Economy Run. These figures are considerably higher than the consumer will be able to obtain with his car, chiefly because the test cars were driven by experts who had familiarized themselves with the test course and thus were able to operate the cars as efficiently as possible. All of the cars in this run listed in the table were equipped with overdrive or automatic transmission. The following had automatic transmissions: *Hudson Jet, Hudson Super Wasp, Hudson Hornet, Lincoln Capri, Nash Statesman.* The following had semiautomatic transmissions: *Chrysler New Yorker, Chrysler Custom Imperial.*

The ratings of the cars are based partly on actual tests of 27 of the models by CR's engineers and consultants, partly on reports from consultants and subscribers. (It was not possible to test in detail all the 48 cars listed, some of which were minor variants of basic models, in the time available; however, the cars not closely studied were for the most part in the high price ranges which constitute only a very small percentage of the cars purchased by American consumers. It is estimated that in 1952 about *75 percent* of the cars sold were in the three lowest price groups [$1450-2500].)

Prices given are the delivered prices as of April 1953 in western New Jersey and eastern Pennsylvania. They are considered as about average for the country as a whole.

Note: The *Buick Special Dynaflow* and the *Studebaker Champion* test cars were received too late to permit our including a full report in this issue. Data on gasoline mileage and acceleration for these two cars are given in the table; a more detailed report will appear in the next issue of the BULLETIN.

Recommendations in Seven Price Groups

Price Group 1 ($1600 to $1899)

In this group, four cars warrant an *A* rating: *Ford 6 Mainline, Chevrolet 150, Plymouth Cambridge,* and *Chevrolet 210.* All of them are good cars, with no serious faults or outstanding advantages, and the choice between them is a difficult one, which must depend in part upon the consumer's personal liking or disliking for the details of the several cars. For many, a choice will be based upon financial considerations and will depend upon which dealer will offer the best trade, either as a discount from standard price or as a larger allowance on the old car. Where there is little or no difference from a standpoint of net cost to a particular purchaser, it is CR's opinion that the *Ford 6* and *Chevrolet 150* or *210* are about equal for first choice, with *Plymouth* close third.

Price Group 2 ($1900 to $2199)

First choice in this group, which includes some cars equipped with an automatic transmission, is the *Pontiac 8* with standard transmission and 6.8 to 1 compression ratio. Second choice, *Chevrolet 210 Powerglide.* Third choice, *Ford 6 Customline Fordomatic.* At this time, we consider that the improved *Powerglide* transmission gives the *Chevrolet* a slight edge over the *Ford 6 Fordomatic.*

Price Group 3 ($2200 to $2499)

First choice, *Buick Special* with standard transmission. Second choice, *Dodge Coronet* with standard transmission. Third choice, *Nash Statesman Super* or *Mercury Custom.* The *Pontiac 8 Hydra-Matic,* although a good car, essentially,

(*Continued on page 20*)

MAKE AND MODEL	Delivered Price, Dollars	Estimated Depreciation	Wheelbase, Inches	Over-all Length, Inches	Over-all Width, Inches	Number of Cylinders	Manufacturers' Rated Horsepower at Revolutions Per Minute	Hp. Per Cu. In. Displacement	Percentage of Weight on Front	Shipping Weight (lb.)	Compression Ratio		Steering Factor	Brake Area, Sq. In.	Brake Factor	Tire Size	Percent Overload on Tires	Turning Diameter, Feet
											Standard	Optional						
Price Group 1																		
Henry J Corsair 4	1619	V. High	100	182	70	4	68 @ 4000	.51	•	2405	7.0	—	•	132	44	5.90x15	—	35
Ford 6 Mainline	1770	Med.	115	198	74	6	101 @ 3500	.47	56	3130	7.0	—	4.3	174	45	6.70x15	—	40
Willys Aero Lark	1786	•	108	181	72	6	75 @ 4000	.47	•	2510	6.9	—	•	133	41	5.90x15	9	38
Chevrolet One-Fifty	1790	Low	115	196	75	6	108 @ 3600	.46	54	3215	7.1	—	4.1	158	40	6.70x15	7	38
Plymouth Cambridge	1835	Med.	114	189	74	6	100 @ 3600	.46	•	2970	7.1	—	3.6	158	42	6.70x15	—	39
Ford V-8 Mainline	1846	Low	115	198	74	V8	110 @ 3800	.46	56	3205	7.2	—	4.3	174	44	6.70x15	7	40
Chevrolet Two-Ten	1881	Med.	115	196	75	6	108 @ 3600	.46	54	3250	7.1	—	4.1	158	40	6.70x15	8	38
Henry J Corsair DeLuxe 6	1895	V. High	100	182	70	6	80 @ 3800	.50	•	2455	7.0	—	•	132	41	5.90x15	8	35
Price Group 2																		
Hudson Jet	1923	•	105	181	67	6	104 @ 4000	.51	•	2800	7.5	8.0	•	132	37	5.90x15	19	•
Studebaker Champion DeLuxe	1937	High	116.5	199	70	6	85 @ 4000	.50	53.5	2710	7.0	7.5	3.8	144	42	6.40x15	—	39.5
Plymouth Cranbrook	1943	Med.	114	189	74	6	100 @ 3600	.46	54	3005	7.1	—	3.6	158	41	6.70x15	—	39
Hudson Super-Jet[2]	2019	•	105	181	67	6	104 @ 4000	.51	55.5	2900	7.5	8.0	4.1	132	36	6.40x15	10	•
Ford 6 Customline Fordomatic	2046	Med.	115	198	75	6	101 @ 3500	.47	•	3210	7.0	—	4.3	174	44	6.70x15	7	40
Pontiac Chieftain 6	2094	Low	122	203	77	6	115 @ 3800	.48	•	3380	7.0	—	•	171	41	7.10x15	—	40.3
Ford V-8 Customline Fordomatic	2122	Med.	115	198	75	V8	110 @ 3800	.46	•	3290	7.2	—	4.3	174	43	6.70x15	9	40
Nash Rambler—2-door hard top[1]	2125	High	100	185	74	6	85 @ 3800	.46	53	2475	7.25	—	2.9	92	30	6.40x15	—	42.3
Pontiac 8	2169	Low	122	203	77	8	118 @ 3600	.44	•	3470	6.8	—	4.6	171	41	7.10x15	7	40.3
Chevrolet Bel-Air Powerglide	2175	Med.	115	196	75	6	115 @ 3600	.49	54.5	3385	7.5	—	4.1	158	38	6.70x15	12	38
Price Group 3																		
Willys Aero Eagle—2-door hard top[1]	2210	•	108	181	72	6	90 @ 4200	.56	56	2590	7.6	—	4.3	133	40	5.90x15	12	38
Nash Statesman Super[1]	2272	High	114	202	78	6	100 @ 3800	.51	•	3045	7.45	—	•	132	35	6.70x15	—	42.5
Buick Special	2336	Med.	121.5	206	76	8	125 @ 3800	.47	•	3710	7.0	7.6	•	185	41	7.60x15	—	39.5
Dodge Coronet[2]	2337	High	119	202	74	V8	140 @ 4400	.58	56	3365	7.1	—	4.2	174	42	7.10x15	—	41.3
Mercury Custom	2343	Med.	118	202	74	V8	125 @ 3800	.49	56	3450	7.2	—	4.5	159	38	7.10x15	6	40
Pontiac 6 DeLuxe Hydra-Matic	2376	Low	122	203	77	6	118 @ 3800	.49	•	3505	7.7	—	•	171	40	7.10x15	7	40.3

[1]Car CR tested was equipped with overdrive, but price of overdrive not included in price shown in table.

[2]Car CR tested was equipped with automatic or semiautomatic transmission, but price given for the car does not include this item, unless it is a "standard equipment" item.

Minimum Road Clearance, In.	Engine to rear wheels Gear Ratio		Engine Revolutions Per Mile		Acceleration Time in Seconds						M.P.G. at 50 M.P.H.	M.P.G. Mobilgas-AAA Run[1]	Rating	REMARKS	MAKE AND MODEL
	Standard	Optional	Standard	Optional	0-30 M.P.H.		20-50 M.P.H.		40-60 M.P.H.						
7.5	4.27	4.55	3370	2510	•	•	•	•	•	•	•	28.3	B−	Very high depreciation.	*Henry J Corsair 4*
7.1	3.9	4.1	2920	2150	•	•	15.1	ba	11.6	a	18.5	27.0	A		*Ford 6 Mainline*
•	4.1	4.56	3240	2520	•	•	•	•	•	•	•	NE	B+		*Willys Aero Lark*
7.0	3.7	—	2770	—	•	•	12.8	a	9.5	g	18.4	NE	A		*Chevrolet One-Fifty*
7.4	3.73	4.1	2790	2150	(See Plymouth Cranbrook)							NE	A		*Plymouth Cambridge*
7.1	3.9	4.1	2920	2150	•	•	13.7	ba	10.7	a	15.9	22.5	A−	Gasoline mileage somewhat low.	*Ford V-8 Mainline*
7.0	3.7	—	2770	—	(See Chevrolet One-Fifty)							NE	A		*Chevrolet Two-Ten*
7.5	4.1	4.55	3240	2510	•	•	•	•	•	•	•	NE	B	Very high depreciation.	*Henry J Corsair DeLuxe 6*
•	4.1	4.27	3240	2360	•	•	•	•	•	•	•	22.0	B+	Entirely new car. Rear leg room inadequate. Depreciation expected to be high.	*Hudson Jet*
7.9	4.1	4.56	3150	2450	•	•	16.8	ba	13.6	ba	20.8	26.9	B	Riding qualities not as good as other cars in the group.	*Studebaker Champion DeLuxe*
7.4	3.73	4.1	2790	2150	•	•	14.3	ba	10.0	a	18.8	22.8	A−	A good car with no serious faults.	*Plymouth Cranbrook*
•	4.1	3.54	3150	2720	5.4	g	10.7	g	10.6	a	20.2	25.4	B+	See *Hudson Jet*.	*Hudson Super-Jet*[2]
7.1	3.31	3.54	2480	2650	8.3	ba	11.2	a	11.7	a	18.9	NE	A		*Ford 6 Customline Fordomatic*
6.5	4.1	—	3030	—	•	•	•	•	•	•	•	NE	A−		*Pontiac Chieftain 6*
7.1	3.31	3.54	2480	2650	8.6	ba	12.2	a	12.4	ba	16.6	NE	A		*Ford V-8 Customline Fordomatic*
•	3.77	4.4	2900	2370	•	•	13.3	ba	13.2	ba	25.4	25.4	B+		*Nash Rambler—2-door hard top*[1]
6.5	3.9	—	2890	—	•	•	•	•	•	•	•	NE	A		*Pontiac 8*
7.0	3.55	—	2660	—	6.6	a	10.0	g	10.7	a	18.7	NE	A		*Chevrolet Bel-Air Powerglide*
•	4.1	4.56	3240	2520	•	•	14	ba	11.2	a	24.5	NE	B+		*Willys Aero Eagle—2-door hard top*[1]
8.0	4.4	4.9	3290	2570	•	•	12.9	a	10.2	a	20.0	19.4	A−	Very good riding qualities.	*Nash Statesman Super*[1]
6.8	3.9	—	2830	—	•	•	•	•	•	•	•	NE	A		*Buick Special*
7.4	3.73	3.54	2760	2620	6.6	a	10.0	g	8.4	g	17.8	23.4	A−	B+ with semiautomatic transmission.	*Dodge Coronet*[2]
6.3	3.9	4.1	2890	2120	•	•	13.4	ba	10.2	a	15.9	23.2	A−		*Mercury Custom*
6.5	3.08	—	2280	—	•	•	•	•	•	•	•	NE	B+	Required use of high-octane gas.	*Pontiac 6 DeLuxe Hydra-Matic*

[1]Car CR tested was equipped with power steering.
[2]See page 15, col. 1, near bottom.
• Information not available.

V. High—very high
vg—very good
g—good

a—average
ba—below average
NE—not entered, or disqualified

MAKE AND MODEL	Delivered Price, Dollars	Estimated Depreciation	Wheelbase, Inches	Over-all Length, Inches	Over-all Width, Inches	Number of Cylinders	Manufacturers' Rated Horsepower at Revolutions Per Minute	Hp. Per Cu. In. Displacement	Percentage of Weight on Front	Shipping Weight (lb.)	Compression Ratio: Standard	Compression Ratio: Optional	Steering Factor	Brake Area, Sq. In.	Brake Factor	Tire Size	Percent Overload on Tires	Turning Diameter, Feet
(Price Group 3 Continued)																		
Hudson Wasp DeLuxe	2376	High	120	202	77	6	112 @ 4000	.48	•	3380	6.7	7.2	4.7	140	34	7.10x15	—	39.3
Pontiac 8 DeLuxe Hydra-Matic	2451	Low	122	203	77	8	122 @ 3600	.45	55.5	3595	7.7	—	4.6	171	39	7.10x15	10	40.3
Price Group 4																		
Buick Special Dynaflow	2529	Med.	121.5	206	76	8	130 @ 3800	.49	53.5	3810	7.6	—	5.6	185	41	7.60x15	—	39.5
Mercury Merc-O-Matic	2533	Med.	118	202	74	V8	125 @ 3800	.49	•	3530	7.2	—	4.5	159	37	7.10x15	8	40
Studebaker Regal Com.—Auto. Dr.	2534	High	120.5	202	71	V8	120 @ 4000	.52	•	3075	7.0	7.5	6.0	160	42	7.10x15	—	41
Oldsmobile Super 88	2569	Med.	120	204	77	V8	165 @ 3600	.54	•	3704	8.1	—	•	192	43	7.60x15	—	42.5
Chrysler Windsor 6[2]	2572	High	125.5	211	77	6	119 @ 3600	.45	53	3655	7.0	—	•	201	46	7.60x15	—	42
DeSoto DeLuxe 6 Powermaster	2606	High	125.5	214	77	6	116 @ 3600	.46	•	3555	7.0	—	•	201	47	7.60x15	—	42.1
Nash Ambassador Super	2661	V. High	121.3	209	78	6	120 @ 3700	.48	•	3480	7.3	—	•	170	40	7.10x15	7	44.7
Packard Clipper[1]	2672	Med.	122	213	78	8	150 @ 4000	.52	54	3725	7.7	—	5.3	172	38	7.60x15	—	46.8
Hudson Super Wasp Hydra-Matic	2712	High	120	203	77	6	127 @ 4000	.48	55.5	3480	7.2	—	4.7	159	38	7.10x15	7	42.3
Price Group 5																		
Buick Super	2782	Med.	125.5	212	80	V8	164 @ 4000	.51	•	3905	8.0	8.5	•	208	45	7.60x15	7	39.6
Packard Clipper DeLuxe	2819	Med.	122	213	78	8	160 @ 3600	.49	•	3745	8.0	—	•	172	38	7.60x15	—	•
Hudson Hornet[1]	2844	High	123.9	209	77	6	145 @ 3800	.47	54.5	3570	7.2	—	5.6	159	37	7.10x15	9	42.3
Kaiser Manhattan	2879	V. High	118.5	211	75	6	118 @ 3650	.52	•	3275	7.3	—	•	176	44	6.70x15	9	38
DeSoto Firedome 8[2,3]	2890	High	125.5	214	77	V8	160 @ 4400	.58	56	3880	7.1	—	3.4	201	43	7.60x15	6	42.1
Oldsmobile 98[2]	2897	Med.	124	215	77	V8	165 @ 3600	.54	54.5	3815	8.1	—	6.3	192	42	7.60x15	—	43
Price Group 6																		
Chrysler New Yorker[3]	3275	High	125.5	211	77	V8	180 @ 4000	.54	55.5	4000	7.5	—	3.5	201	42	8.00x15	—	42
Packard Cavalier 300	3324	High	127	218	78	8	180 @ 4000	.55	•	3960	8.0	—	•	208	44	8.00x15	—	•
Buick Roadmaster	3343	High	125.5	212	80	V8	188 @ 4000	.58	53.5	4100	8.5	—	5.9	219	45	8.00x15	—	41.5
Price Group 7																		
Cadillac 62[3]	3768	V. Low	126	216	80	V8	210 @ 4150	.63	53	4215	8.25	—	6.0	259	52	8.20x15	—	43.2
Packard 400 Patrician	3825	V. High	127	218	78	8	180 @ 4000	.55	•	4190	8.0	—	•	208	42	8.00x15	6	•
Lincoln Capri[3]	3875	High	123	214	78	V8	205 @ 4200	.65	54	4150	8.0	—	3.4	202	41	8.00x15	6	45.8
Chrysler Custom Imperial	4350	V. High	133.5	219	77	V8	180 @ 4000	.54	•	4425	7.5	—	•	201	39	8.20x15	5	•

[1]Car CR tested was equipped with overdrive, but price of overdrive not included in price shown in table.

[2]Car CR tested was equipped with automatic or semiautomatic transmission, but price given for the car does not include this item, unless it is a "standard equipment" item.

Minimum Road Clearance, In.	Engine to rear wheels Gear Ratio		Engine Revolutions Per Mile		Acceleration Time in Seconds						M.P.G. at 50 M.P.H.	M.P.G. Mobilgas-AAA Run[1]	Rating	REMARKS	MAKE AND MODEL
	Standard	Optional	Standard	Optional	0-30 M.P.H.		20-50 M.P.H.		40-60 M.P.H.						
6.1	4.09	3.07	3030	2270	•	•	•	•	•	•	•	NE	B+		*Hudson Wasp DeLuxe*
6.5	3.08	—	2280	—	5.3	g	11.7	a	9.7	g	17.7	NE	B+	Required use of high-octane gas.	*Pontiac 8 DeLuxe Hydra-Matic*
6.8	3.6	—	2610	—	6.6	a	11.0	a	11.2	a	16.1	NE	A	Required high-octane gas.	*Buick Special Dynaflow*
6.3	3.31	3.54	2450	2620	•	•	•	•	•	•	•	NE	A–		*Mercury Merc-O-Matic*
7.7	4.09	3.54	3030	2620	7.7	a	10.0	g	9.6	g	19.1	24.5	B+		*Studebaker Regal Com.—Auto. Dr.*
7.1	3.64	3.23	2640	2340	•	•	•	•	•	•	•	NE	A	Required high-octane gas.	*Oldsmobile Super 88*
7.6	3.9	—	2830	—	6.5	a	10.5	g	12.7	ba	16.7	NE	A–	B+ with semiautomatic transmission.	*Chrysler Windsor 6*[2]
7.0	3.9	4.3	2830	2180	•	•	•	•	•	•	•	NE	A–		*DeSoto DeLuxe 6 Powermaster*
•	4.1	4.4	3030	2280	•	•	•	•	•	•	•	22.5	A–	Depreciation very high.	*Nash Ambassador Super*
•	3.9	4.1	2830	2980	•	•	11.4	a	8.5	g	18.0	18.7	A–	Required use of high-octane gas.	*Packard Clipper*[1]
6.1	3.07	—	2270	—	5.8	g	13.5	ba	11.4	a	18.0	19.1	B+		*Hudson Super Wasp Hydra-Matic*
6.8	3.6	—	2610	—	•	•	•	•	•	•	•	NE	A–	New engine. Required use of high-octane gas.	*Buick Super*
•	3.9	4.1	2830	2980	•	•	•	•	•	•	•	NE	A–	Required high-octane gas.	*Packard Clipper DeLuxe*
6.1	4.09	4.55	3030	2360	•	•	10.5	g	7.7	vg	18.5	18.9	B+		*Hudson Hornet*[1]
7.0	3.91	3.31	2920	2480	•	•	•	•	•	•	•	22.3	B+	Very high depreciation.	*Kaiser Manhattan*
7.0	3.73	4.1	2710	2090	6.2	g	9.0	g	8.1	g	17.7	20.9	A	A– with semiautomatic transmission.	*DeSoto Firedome 8*[2,3]
7.1	3.64	3.42	2640	2480	5.3	g	10.5	g	8.7	g	17.2	NE	A–	Required use of high-octane gas.	*Oldsmobile 98*[2]
7.9	3.54	3.36	2520	2390	6.4	g	8.5	vg	9.8	g	16.9	17.8	A–	*Fluid-Matic* standard equipment. *Fluid-Torque* extra.	*Chrysler New Yorker*[3]
•	3.9	3.54	2770	2520	•	•	•	•	•	•	•	NE	A–	Required high-octane gas.	*Packard Cavalier 300*
7.0	3.6	—	2560	—	6.6	a	9.4	g	8.3	g	16.0	NE	A	New engine. Used high-octane gas. *Dynaflow*, power steering std. equip.	*Buick Roadmaster*
7.3	3.07	—	2160	—	4.4	vg	6.5	vg	6.1	vg	20.6	NE	A	Required use of high-octane gas. Gasoline mileage vg. *Hydra-Matic* is std. equip.	*Cadillac 62*[3]
•	3.54	—	2520	—	•	•	•	•	•	•	•	NE	A–	Required high-octane gas. *Ultramatic* is std. equipment.	*Packard 400 Patrician*
7.4	3.31	—	2350	—	5.1	g	10.1	g	9.0	g	16.3	19.9	B+	Used high-octane gas. *Hydra-Matic* is std. equip.	*Lincoln Capri*[3]
7.5	3.54	—	2490	—	•	•	•	•	•	•	•	17.3	A–	*Fluid-Torque* is standard equipment.	*Chrysler Custom Imperial*

[1]Car CR tested was equipped with power steering.
[2]See page 15, col. 1, near bottom.
• Information not available.

V. High—very high
vg—very good
g—good

a—average
ba—below average
NE—not entered, or disqualified

(*Continued from page 15*)

has, because of its high compression ratio, been giving difficulty with pinging, requiring frequent removal of carbon. This, in CR's opinion, tends to make it less desirable at this time than the other four named.

Price Group 4 ($2500 to $2750)

First choice, *Buick Special Dynaflow*. Second choice, *Oldsmobile Super 88*. As a third choice, *Mercury Merc-O-Matic, DeSoto DeLuxe 6* with standard transmission, and *Chrysler Windsor 6* with standard transmission are about on a par.

Price Group 5 ($2751 to $2999)

First choice, *DeSoto Firedome 8* with standard transmission (overdrive optional). Second choice, *Oldsmobile 98*. Third choice, *Buick Super*.

Price Group 6 ($3000 to $3500)

First choice, *Buick Roadmaster*. Second choice, *Chrysler New Yorker*. Third choice, *Packard Cavalier*.

Price Group 7 ($3500 and up)

First choice, *Cadillac 62*. Second choice, *Packard Patrician* or *Chrysler Imperial Custom*.

Many Cases of Poisoning are Unnecessary

HUNDREDS of lives are lost each year as a result of contact with various household products which contain unsuspected poisons. Indeed, about 600 children die each year because they have obtained access to some item relatively harmless in normal use but deadly poisonous if eaten or swallowed by a child. Among such products are certain cosmetics, insect repellents, silver cleaning and "plating" solutions, paint removers and solvents. It is unfortunate that the average consumer will often assume that unless the label carries a prominent poison warning and contains a list of poisonous chemicals as well as suggestions for the antidote, many a common product will be accepted as harmless even though it is in a form which might be taken internally by mistake or through ignorance of the danger, or by a young child. Manufacturers of products containing chemicals that are poisonous, either when taken internally or by inhalation, should familiarize themselves with the seriousness of this problem and reflect on the unnecessary deaths of young children, and so label their packages in a prominent and permanent fashion that parents and others are put on notice. Full information should be given about the ingredients of their products, as well as a possible antidote or antidotes. Actually, informative labeling, though manufacturers argue against it for various reasons, could save the lives of many persons who have taken a poison accidentally or unknowingly, by cutting the precious time that might otherwise be required to determine by analysis or by inquiry by telephone or in other ways what poisonous ingredient was in the product and what might be used to counteract it. Often in poisoning cases, the saving of a life may hang upon a matter of minutes; and the loss of perhaps many hours to try to find out what were the ingredients of the poisonous mixture could easily result in permanent disability or loss of life of the unfortunate victim.

The Engineer's Digest, published by the U.S. Coast Guard, points out that non-descriptive names complicate the problems of safety in the use of solvents. The small manufacturer or jobber will suppress information about the composition of his product on the ground either that it is his trade secret and the secrecy is necessary to keep him in business, or that the material contains a rare and exceptional ingredient not known to others. (Quite commonly a small businessman, or even a large one, for that matter, will allege that his product is absolutely nontoxic, when in fact he just hopes it is, and does not know for sure whether it is poisonous or not.) The Coast Guard publication recommends that Coast Guard personnel should use *only solvents whose composition is known*, and suggests that if industrial buyers were to present a united front to the vendors on this issue, the desirable and life-saving information on composition of trade-name solvents would be forthcoming. On the specially important matter of toxic solvents, we quote from the Engineer's Digest: "Halogenated hydrocarbons. . .also [like the aromatics, benzene, toluene, xylene] are very toxic. . . .Examples are carbon tetrachloride, trichloroethylene and dichlorobenzene."

Three New Dishwashing Machines

WITH the completion of the tests on the *American Kitchens*, the *Apex*, and the *Youngstown* dishwashing machines, CR has tested practically all the more important brands, and it can be said that we have yet to test a machine which washed and dried every dish and piece of silverware used in a controlled test to our full satisfaction. Some machines, such as the *American Kitchens*, *General Electric*, and *Kitchen Aid*, approached this desirable degree of perfection in washing and drying dishes. With many of the machines tested, however, effectiveness in washing was not thoroughly satisfactory, or drying was not complete, or a combination of both disadvantages was found.

When considering the purchase of an automatic dishwashing machine, first decide whether its claimed advantages will outweigh certain disadvantages common to all machines. If the family is small, two or three persons, there is not likely to be a saving in time as compared with hand washing, since the dishes and silverware must still be rinsed or scraped. In addition, pots and pans must be thoroughly scraped and all dried food particles removed by hand rubbing with a pot cleaner if a satisfactory washing job is to be expected. This operation, which is most disliked about hand dishwashing, will often require getting one's hands in water, a procedure potential buyers assume will no longer be necessary when they invest upwards of $250 to $350 in an automatic dishwasher. (These prices are without installation.)

Installation charges for a permanent installation may be considerable—$50 to $125 or more in many cases—and it is important not to overlook this outlay when considering the purchase of a dishwasher. For this reason, a family living in a rented home may find that a portable unit is much to be preferred for their use since there will be no installation charge involved, and the unit can readily be moved in the event of a change of residence.

In moderate to large sized families, four persons or more, the use of a dishwashing machine should result in some saving in time. This will be particularly noticeable if the few dishes used for breakfast and lunch can be placed in the machine and washed with the dishes used for the evening meal. This method also results in a saving in the amount and cost of hot water, electricity, and detergent used, and has the advantage of helping to extend considerably the life of the machine.

Aside from the fact that it helps eliminate a very humdrum household chore, machine dishwashing offers a very important advantage over hand washing—the use of high temperatures for both the washing and drying operations. The

Apex Dish-A-Matic Portable

hands cannot be kept in water much above 115°F. In a good dishwashing machine, the dishes are washed at a much higher temperature, and in some, during the rinsing or drying cycles, the temperature will be 160°F or higher—a real advantage in so far as good bacteriological cleansing is concerned.

The relative desirability and convenience in use of the two general kinds of machines is not readily evaluated; if the housewife prefers "top loading" to "front loading," the top-loader is the kind she should purchase. In a study of this question made at The State College of Washington Institute of Agricultural Sciences, it was found that a machine location on the left side of the sink was better than on the right side for saving steps and arm work for right-handed workers; however, there was no preference in so far as time saving was concerned. Top opening required more bending, front opening more use of the arms. Front opening does save space, since the top can be used for a counter. The pull-out drawer or drop-door may create congestion in a small kitchen, however. With top opening, the cabinets above the washer may have to be placed higher on the wall than normally, so that the lid can be opened fully.

The particular detergent used may affect the over-all thoroughness of the washing and drying operation. Manufacturers' instruction books have included both *Calgonite* and *Electrasol* as recommended detergents for practically all of the machines tested in the past two years. CR found that *Calgonite* was much to be preferred in most of these machines, possibly because of the characteristics of the water used for the tests. It is entirely possible that a similar preference would obtain in favor of *Electrasol* in some areas. In any event, soap should not be used since the sudsing action of soap may interfere with or reduce considerably the thoroughness of the washing.

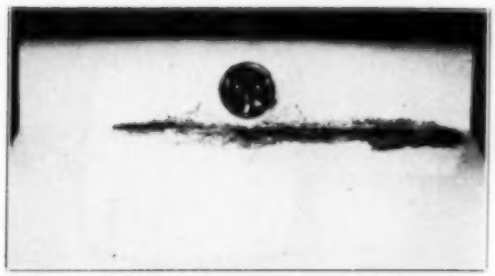
CR prefers the use of dish racks of the kind that are covered with a plastic coating. Bare wire racks will be more likely to chip the edges of fine china plates during the loading operation and may indirectly cause stains or discoloration on silverware placed in a metal container. In addition, rough edges in a metal container may scratch silverware.

It must not be assumed that any appliance so complex as an automatic dishwasher can provide long working life without need for occasional servicing. Purchasers of any and all complex appliances run some risk of having to pay substantial bills for servicing or repairs. The fact that in some instances such attention may be needed fairly early in the life of the machine does not necessarily mean that the washer is a poor product relative to other makes.

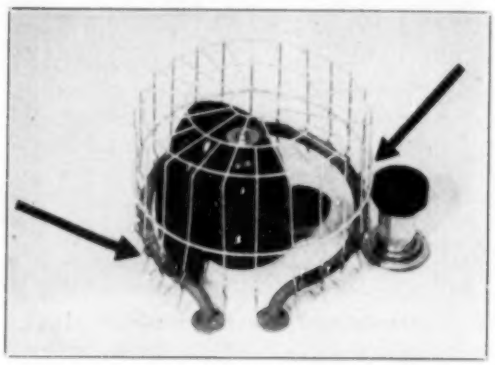
American Kitchens Model DW-24

CR's Tests

CR's test procedures are directed primarily toward determining the effectiveness of the machines in washing and drying tableware. Time for a washing cycle, amount of electricity used, electrical safety (as measured by leakage current and high-voltage breakdown measurements), water consumption, operation at different water pressures, and radio and television interference were also determined. In addition to an examination of the construction and design, each machine was run through at least 45 complete cycles to reveal possible weaknesses in design or operation. It should be noted, however, that one cannot be sure from any short-time test that any or all of the machines will not develop some defects or troubles after prolonged use in the home. Cost of operation per month is based upon three uses per day at 3½ cents per kilowatt-



The top of the American Kitchens dishwasher showing the puddle of water which had formed at the end of the drying cycle. (A coloring material was added for purposes of clarity.)



The arrow at the left indicates the point at which the heating coil and propeller came into contact during one of the runs on the American Kitchens machine. The arrow at the right shows how the drain plug, at the same time, was too close to the wire protecting screen for proper operation (see listing).

hour. The cost of heating the hot water supplied to the machine by the home water heating system, and the cost of the detergent are not included. Note, however, that the cost of the detergent may amount to about 75 cents a month if the machine is used three times daily. Radio and television interference were not considered objectionable.

A. Recommended

The several good features of the American Kitchens Model DW-24 leave little doubt that it is one of the best dishwashers now available. The prospective buyer should make sure that the two defects mentioned in the listing have been corrected in the machine which the dealer will deliver to him.

American Kitchens Roto-Tray Dishwasher, Model DW-24 (American Kitchens Div., Avco Mfg. Corp., Connersville, Ind.) $340. Permanent installation. *Model DW-48A Dishwasher-Sink* combination at $440 is similar in operation. This washer is rated at 115 volts, 16.5 amperes, and should be connected into a branch circuit that has no other appliances, unless the circuit was actually designed for a higher current (wire heavier than No. 12). Over-all dimensions: 24 in. wide, 25½ in. deep, 40¼ in. high. Operation is completely automatic. Had pilot light to indicate when unit was operating. Drop-door front leaves top of unit available as counter space. Top and bottom racks roll out for loading. Ease of loading considered very good. Timer control can be adjusted manually to skip or repeat any part of the cycle, an advantage. Propeller-type water agitator. Complete cycle, consisting of washing, rinsing, and drying periods, required 34 min. A 1000-watt ring-shaped heating element, located near the bottom of the tub, was on for the complete cycle. Maximum temperature reached during drying cycle, 175°F, relatively very good and considered sufficiently high. Assuming 3 cycles of operation per day, would use about 20 gal. of hot water and 2080 watt-hr. of electricity (estimated monthly operating cost, $2.20). Dishwashing results were very good. Dishes and silverware were dry at end of cycle except for water left on concave bottoms of some coffee cups located in top tray. Glasses were clean and dry.

¶This machine made a good showing, but two defects were present which CR brings to the manufacturer's attention. (1) When water entered the tub for the wash and rinse cycles, it passed through an anti-syphon device located centrally behind the vertical panel on the top-rear of the dishwasher. This device was improperly baffled and the result was that some water sprayed through the protecting grille and formed a puddle on the top working surface. Since this same device serves as a vent for the unit during the drying operation, some condensed moisture also was added to this puddle during the drying period (see illustration on this page). (2) The heating coil located in the bottom of the compartment was not securely fastened and had a tendency to move sidewise when the machine was operating. On one occasion during the tests it moved sufficiently to be struck by the propeller, and on another it interfered with the automatic action of the drain plug. **3**

B. Intermediate

As compared with the Youngstown Model B27-1D, the Apex Dish-A-Matic Rollaway (Portable) would be preferable on the basis of over-all results. Its capacity was somewhat less, however, than the regular size machines such as General Electric or American Kitchens.

Apex Dish-A-Matic Rollaway, Model 891A (Apex Electrical Mfg. Co., Cleveland) $250. A portable model requiring no permanent installation or changes in electric wiring; complete unit is mounted on casters for ease in moving. Rated 15 amperes at 115 volts; use of another appliance, such as toaster or grill, on same 15 or 20 amp. branch circuit would not be feasible. Dimensions: 24¼ in. wide, 20¾ in. deep, 36½ in. high. Operation is semiautomatic; water-heating tank is filled manually from faucet. Machine is loaded from top. Upper rack must be removed to load lower rack. Ease of loading considered good, but wire racks were considered deficient in some respects. Operation following manual fill was automatically-controlled; there was no provision for

shortening or repeating any part of the cycle, a minor disadvantage. Complete cycle consists of a washing period and two rinses after which lid opens and dishes dry naturally in air—total time, 17 min. The time required to heat the water was dependent upon the temperature of the incoming water and varied from 11 to 51 min. for 150°F and 64°F water. These times, of course, must be added to the above figures to obtain the total time necessary for the operation. The water tank in the machine holds all the water needed for the complete cycle, an advantage. Maximum temperature in compartment during second rinse, about 162°F, was considered to be fairly good. Daily water consumption, about 11 gal. of hot water and 1880 watt-hr. of electricity (hot water from house supply was at 150°F when entering machine). Estimated monthly operating cost, $2. Dishwashing results were fairly good when service for 6 was washed, but improved considerably when service for only 4 was loaded. The capacity of the *Apex* was not as large as that of the *American Kitchens* unit, for example, but should be ample for a family of 4. In all test runs, the glasses were not washed clean or thoroughly dried. Over-all results, however, were considered superior to those obtained with the *Youngstown*. **1**

The Youngstown B27-1D (also rated B. Intermediate) was claimed to be much improved over the Model B27D tested by CR in 1951. There was not sufficient difference in the test results on the newer machine, overall, to warrant a change in the rating.

Youngstown Jet-Tower Dishwasher, Model B27-1D

(Mullins Mfg. Corp., Salem, Ohio) $330. Permanent installation. Rated 16.1 amperes at 120 volts; machine should therefore have its own branch circuit wiring unless the circuit was designed for a higher current. Over-all dimensions: 27 in. wide, 26¾ in. deep, 39 in. high. Operation is completely automatic. Pilot light not needed and not supplied. Machine is loaded from top; upper rack must be removed to load lower rack. Ease of loading considered fairly good; however, the "*Jet-Tower*" which extends the full vertical height in the center of the compartment was "in the way" and on several occasions was accidentally struck when the bottom rack was being loaded. Operation is timer-controlled and cannot be interrupted during the cycle, a minor disadvantage. Complete cycle consists of a washing and 2 rinsing periods after which the lid lifts automatically and the washed load is air-dried naturally. Washing and rinsing required about 10 min. A booster water-heating tank with thermostat control is located in the bottom compartment and is permanently connected to the house wiring. This booster is intended to maintain water temperatures for the washing and rinsing periods but was found ineffective in that, except for a very short interval at the start of the wash period, the temperature of the wash water entering the tub was only slightly above the 150°F temperature of the incoming water. Maximum temperature reached in compartment during second rinse, about 140°F; not considered sufficiently hot for adequate bacteriological cleansing of dishes. Daily consumption, about 20 gal. of hot water and 1850 watt-hr. of electricity (estimated monthly operating cost, $2; figure includes stand-by loss in booster tank). Dishwashing results were fairly good, but over-all results did not compare with those obtained in the *American Kitchens* unit. Glasses, for instance, while clean in all runs, were wet at lines of contact with the rack and required hand toweling. **3**

Youngstown Jet-Tower Model B27-1D

* * *

The following are brief listings of models of automatic dishwashers previously reported. (For detailed comments, readers are referred to CR BULLETINS for Oct. 1949, Oct. 1950, and Dec. 1951.)

A. Recommended

General Electric, Model UC-110; Kitchen Aid, Model KD-20.

B. Intermediate

Apex Dish-A-Matic, Model 970-1; Homart, Model 787-24; Hotpoint, Models MC4, MC5, MC6; Westinghouse, Model DWA-12.

C. Not Recommended

James Port-O-Matic, Model APJ.

A Power Weed-Cutter and a Lawn Edger

The engine-driven Scythette and electric-powered Magic Wand trimmer and edger.

THE *Scythette Power Scythe* is an engine-driven sickle-bar that is intended to be carried about. It has a 1-cylinder gasoline engine which drives a 20-inch oscillating cutter bar at the end of a 4-foot shaft. The user carries the *Scythette* by means of a shoulder strap and guides it with two handles (see illustration). The manufacturer claims that it also will clip reeds or underwater growth.

CR tried the *Scythette* in various weedy areas. The power was sufficient to cut heavy growths of weeds 4 feet high, but the high weeds had a tendency to pile up on the cutter bar and the operator's feet. The appliance was fairly easy to handle, even when cutting around rocks and trees and under fences, but its use became tiring after an hour's continuous work. (Nevertheless, its use in cutting a heavy growth of weeds was far to be preferred to cutting with a scythe.) The major objection to the *Scythette* was the great amount of noise produced. The high-pitched scream of the 2-cycle engine and the clatter of the cutter bar might very possibly give real cause for complaint by the next-door neighbors.

The *Magic Wand Electric Hedge Trimmer and Lawn Edger* is a lightweight electric cutter mounted at the end of a 3-foot handle. The cutter is a partially shielded blade which is mounted on the shaft of a small motor and rotates at a very high speed. The *Magic Wand* was easy to use on hedges, or along the edge of a walk, but the angle at which the handle was attached required the operator to stoop while trimming under bushes or other places where the cutter had to be held horizontally.

The *Magic Wand* did cut hedge and grass satisfactorily, but the very high speed of the rotary cutter caused clippings to be thrown over a wide area and upon the operator. This may not be objectionable to some persons, when cutting a light hedge or trimming under bushes, but when the *Magic Wand* was used in the vertical position to edge a lawn as shown in the illustration, small stones and debris were thrown upward with considerable force. This, of course, could be a real hazard and could cause serious injury to the eyes or face of the user.

The *Magic Wand* passed the electrical safety

Scythette Power Scythe

Magic Wand Electric Hedge Trimmer and Lawn Edger

tests, but it is important to remember at all times that an electric appliance for outdoor use involves special hazards because of dampness and contact of the body with the ground; the user should therefore be very careful to keep the appliance dry and in good electrical condition. The cord should be replaced (with the special type of power cord made for use outdoors which has a grounding conductor run with the circuit conductors) when any wear, cutting, or deterioration is evident.

B. Intermediate

Scythette Power Scythe (Hoffco, Inc., Richmond, Ind.) $146. A high-grass and weed cutter carried with a shoulder strap. Model tested had 1¼-hp. 2-cycle engine. (Current model has a 2-hp. engine.) Engine drives a 20-in. oscillating cutter bar at the end of a 4-ft. shaft. Weight, approximately 26 lb. Fairly easy to handle on uneven ground, around obstructions, and under fences. Sufficient power to cut heavy growths of weeds. As noise is such that it may be objectionable to some people, this point should be checked before deciding on the purchase. (Not tested for underwater cutting, which manufacturer claims appliance can do.) A small chain saw attachment is available, but was not tested.

C. Not Recommended

Magic Wand Electric Hedge Trimmer and Lawn Edger (Apex Mfg. Laboratories, South Pasadena, Calif.) $17.95. An electric motor-driven rotary cutter with 3-ft. handle. Very high speed of cutter blade throws clippings, dirt, and debris over operator and presents a hazard, where stones or hard particles are encountered by blade, as when edging lawn.

Growing Plants and Trees Help Keep a Building Cooler in Hot Weather

MANY PERSONS do not appreciate the value of green trees and plants about a home or office in helping to provide a cool environment in the summer. Asphalt paving, for example, reaches a much higher temperature than a lawn, whence an area of grass helps greatly to keep a cool area about a house or work place and tends also to reduce the carry-over of heat from the daytime hours into the evening. Vines have their disadvantages on buildings since they may cause damage to the woodwork or to paint coatings, but they are valuable in keeping the sun off the walls and thus prevent heat absorption and reflection through walls and windows. According to a University of California release, they can even help cool roofs in very hot areas. Professor Robert B. Deering of the University of California College of Agriculture recommends wider use of trees and plants for cooling and increasing comfort in warm areas rather than just for their ornamental value. The greater the number of trees, vines, shrubs, plants, and the larger the area of lawn about a house, the greater the cooling effect, if there are sufficient open spaces to permit circulation of air.

Men's Plastic Raincoats

THE only sure thing about a raincoat is that it will often be at some place where you don't need it. For this reason it may be wise to have two of the relatively inexpensive plastic raincoats, or a plastic raincoat in addition to a cloth raincoat, so that one may be kept at home and one at work or in the car, for protection from sudden showers. A plastic raincoat is not only light in weight (it will weigh in the neighborhood of half a pound to a pound), but it can be folded into a package small enough to carry in a coat pocket. Since the five lightest raincoats had the weakest material, it is evident that the risk of early failure is increased if one buys a raincoat of very light weight.

To give maximum convenience and protection from rain, a plastic raincoat should be large enough to wear over a regular coat or suit and should have sleeves that are amply long. Pockets are a convenience but sometimes are a source of leakage. The most convenient are the "two-way" slash pockets which provide pockets in the raincoat itself and give access to the pockets in the regular clothing, besides. The two-way pocket opening may allow water to enter, however, and so should have a wide overlap and reinforced edges. Most of the pockets on the coats tested were unduly shallow, so that gloves or keys might easily be lost from them.

The most important quality of a raincoat is its waterproofness. The seams must be tight, and the front opening should have a slide fastener or enough buttons or snaps to close it well. Plastic raincoats have sewn, cemented, or fused seams. *CR does not recommend the use of sewn seams in plastic raincoats.* Only three of the coats tested had sewn seams, and two of these, the *Prepac* and the *Protecto*, leaked freely. Seams of all the raincoats were subjected to breaking strength tests, and the sewn seams were from 75 to 90 percent weaker than the best of the fused or cemented seams.

Some coats may be obtained with either snaps or a zipper front closure, and the zipper usually adds $2 to $3 to the cost. (The *Shower Master*, with a *Talon* fastener, however, sold at $2.98.)

CR's buyer, as many men would, bought the cheaper button- or snap-fastened coats rather than the higher-priced zipper-closed ones. A zipper is preferable to buttons or snaps because it gives the best seal against water leakage and won't "pop off" like a button, or tear loose like a snap. Snaps may be easier to use than buttons when your hands are cold, but the choice between the two will for many be merely a matter of personal preference.

Protection properties of the raincoats were judged on waterproofness and design—overlap, length, and spacing of the buttons or snaps of the front closure.

All the coats tested had raglan-style sleeves, and all came with plastic carrying cases into which they could be folded. Unless otherwise noted in the listings, all had fused seams, two-way slash pockets, and ventilation holes under the arms. (Ventilation holes are desirable because the plastic films do not allow the passage of air.) With four coats, the *Raynster*, the *Hampton*, the *Neverleek*, and the Sears' *Elasti-*

Glass, plastic hat covers were furnished.

The plastic films used in the coats tested were made of vinyl or allied resins. All of them melted when they were touched by a lighted cigarette, but did not burst into flame.

According to one manufacturer, vinyl materials should not remain in prolonged contact with painted, varnished, enameled, or lacquered surfaces. Plastic raincoats should therefore be hung on plain wood or plain metal hangers. One manufacturer warns against contact of the film with rubber compounds and with cleaning fluids. The coats should be kept away from heat, and should not be hung on radiators to dry. In the service tests in which the coats were worn by members of CR's staff, the most frequent complaint was their stiffness, especially in cold weather, but this is probably unavoidable. In one case the turned-up collar became stiff enough to feel unpleasantly sharp on the wearer's neck.

The service tests did not bring out what the estimated life of plastic raincoats might be. Much depends on the care given the coat by the user. Two of the coats tested, however, did carry a guarantee which mentioned a specific life. The *Hampton* had a 5-year replacement "bond" guaranteeing that in that period the garment would remain waterproof and washable and that the seams would not rip, the color would not fade, the plastic would not crack, peel, or mildew. The *Neverleek* carried a two-year guarantee covering the same properties. We believe that the purchaser should seek to buy a raincoat with such a guarantee if he must buy a brand which is not among those favorably recommended by Consumers' Research. It will be noted that all but one of the *C-Not Recommended* raincoats were in the lowest price group. In this case there evidently is a degree of relationship between price and quality although in the two higher price groups this relationship does not appear.

A. Recommended

Fashion Tailored, Style G6605 (Sears-Roebuck's Cat. No. 45—7605) $2.89, plus postage. Greenish gray. Translucent. 5-snap closure. Material and seams among the strongest of the coats tested. Pockets rather shallow. **2**

Swell-Wear (Swell Wear, Inc., 286 Fifth Ave., N.Y.C.) $2.95. Smoke color. Translucent. 5-button closure. Material and seams among the strongest of the coats tested. **2**

Bond (S. Buchsbaum & Co., 1737 S. Michigan Ave., Chicago) $3.95. Smoke color. Translucent. 5-snap closure. Strong material. Pockets rather shallow. **3**

Elasti-Glass (Montgomery Ward's Cat. No. 4605; manufactured by S. Buchsbaum & Co.) $4.75, plus postage. Smoke color. Translucent. 5-snap closure. Cemented seams. Strong material and seams. Pockets very shallow. **3**

Elasti-Glass (Sears-Roebuck's Cat. No. 45—7620; manufactured by S. Buchsbaum & Co.) $4.89, plus postage. Smoke color. Essentially the same as Ward's *Elasti-Glass*. Hat cover supplied. **3**

U.S. Raynster (U.S. Rubber Co., Washington, Ind.) $4.98. Smoke color; available also in spruce green. Translucent. 4-snap closure. Hat cover supplied. Part fused, part cemented. Strong material. Pockets rather shallow. **3**

B. Intermediate

Wat-A-Kote (Almar Mfg. Co., Inc., 1270 Broadway, N.Y.C.) $2.99. Smoke color; textured finish. Opaque. 5-button closure. Material and seams not so strong as is desirable. Pockets shallow. No ventilators. Carrying case had convenient plastic zipper closure. Coat available with snap closures. **2**

Wards (Montgomery Ward's Cat. No. 4604; manufactured by Neptune Raincoat Co., New York 2) $2.95, plus postage. Smoke color. Translucent. 5-snap closure. Strength of material and seams moderately good. **2**

Climatic M-500 (Climatic Rainwear Co., Inc., Empire State Bldg., N.Y.C.) $4.95. Smoke color. Translucent. 6-snap closure. Pockets with no slits for access to suit pockets. Seams were weak. **3**

Hampton (Cable Raincoat Co., 68 Northampton, Boston 18) $4.95. Smoke color outside, checked pattern inside. Opaque. 4-button closure; an envelope of 2 extra buttons is supplied. Spacing between buttons is too long. Strong material, but seams somewhat weak. Pockets shallow. Hat cover supplied. Guaranteed for 5 years. **3**

Neverleek (Cable Raincoat Co.) $3.98. Smoke color; shiny, textured finish. Opaque. 4-snap closure. Hat cover supplied. Seam strength, low. Pockets shallow. Guaranteed for 2 years. **3**

Plymouth Perfect (Plymouth Rubber Co., Inc., Canton, Mass.) $4.95. Smoke color; textured finish. Translucent. 5-snap closure. Material and seams fairly weak. **3**

C. Not Recommended

Prepac (Prepac Inc., 151 W. 26, N.Y.C.) $1.49. Smoke color; textured finish. Translucent. 5-snap closure. Stitched seams leaked water. Shallow pockets with no slits for access to suit pockets. Breaking strength of material and seam strength, very low. No ventilators. **1**

Protecto (Anderson Associates, Chicago 20) $1.99. Smoke color. Translucent. 5-snap closure. Stitched seams leaked water. No ventilators, no pockets, no slits for access to suit pockets. Strong material, but very weak seams. **1**

Sears Raintite (Sears-Roebuck's Cat. No. 25—3382G; manufactured by Richards & Associates, Fort Myers, Fla.) $1.95, plus postage. Smoke

color. Translucent. 5-snap closure. Material and stitched seams were very weak. No ventilators or pockets, but had slits for access to suit pockets. **1**

Wards (Montgomery Ward's Cat. No. 4600; manufactured by Hygrade Novelty Corp., 220 Fifth Ave., N.Y.C.) $1.69, plus postage. Smoke color. Translucent. 5-snap closure. Pockets with no slits for access to suit pockets. Weak material and seams. **1**

Shower Master (Whitewater Raincoat Co., Whitewater, Wis.) $2.98. Smoke color. Translucent. Zipper closure with 2 snaps. Breaking strength and tear resistance, low. **2**

Get It in Writing, with Full Details — or Look Elsewhere

THERE have been letters recently requesting information about a storage battery which is alleged to show special recuperative ability. As many consumers have learned by experience, it is easy to improve some useful properties of an article if you are willing to suffer a loss of some other properties. A special degree of recuperative ability in a storage battery can be gotten by reducing the concentration of the electrolyte, *but* in doing this, it is to be expected that the output in ampere-hours for a given size of battery will be reduced. The better of the batteries customarily sold—for which the special claim is not made—are believed to represent about the right compromise between size and output capacity. It is well, too, to discount heavily claims for any storage battery that it will last longer than other batteries, or will last as long as your car. It is unlikely that any special merit, *when all important factors are considered*, will attach to some make of battery (usually one of an unknown or little-known brand) for which very special or unusual claims of long life or recuperative ability are made. Small manufacturers *could* do research which would give them an advantage in battery design and development, but in practice, they have not been distinguished for their contributions to improvement in design or lowering the cost of storage batteries.

In some cases it has been brought to our attention that as to certain batteries that are being sold on the claim of very long life, the claim isn't in writing; it is made orally by a dealer. The salesman simply says it is so that the battery will last 5 or 7 years, or the life of the car, or some other persuasive figure. A battery—or any other appliance on which a guarantee is important—should never be bought on any basis except with the guarantee in writing, showing the manufacturer's and dealer's full names and addresses, and at what place and exactly under what conditions the guarantee will be met if there is reason to ask for fulfillment of its terms later on. If the claim of especially long life or other superior performance is made only in the sales talk, it will be hopeless to obtain redress when the battery fails to live up to the claim; indeed, the manufacturer is very likely to assert that no such claim was made, or that it was "unauthorized," which leaves the consumer holding an empty bag, where he should be in possession of a valid guarantee which he could do something about. Be sure in buying a battery guaranteed for an exceptionally long life, that the price is not higher than is warranted by the actual average service life users may expect, and that the company is a substantial, well-established one, that will make good on the guarantee when and if necessary.

Sales Technique in Selling TV

PERSONS who are buying a television set should bear in mind that the conditions of viewing in a showroom do not necessarily reflect the behavior the set will show in the home. Dealers are sometimes not above playing up one brand in preference to another, in order to take advantage of better discounts from distributors (higher profit on the retail sale) and there are very definite, easily applied expedients which they can use to make one set appear better than the other in the showroom—or they may use the same techniques to make a higher-priced set show a better picture than a lower-priced set of the same make. If there is any reason to doubt the correctness or honesty of the demonstration, the prospective buyer should not make up his mind until he has seen the sets which he is considering in operation under the conditions which are to obtain in his own home, provided that both sets are given a correct adjustment to his antenna and other necessary adjustments have been properly made.

Off the Editor's Chest

(*Continued from page 2*)

ham's Vegetable Compound; with these and other material he proceeded to deluge Senators, the Bureau of Standards, and Washington officials and others as proof that the Bureau was unscientific in condemning battery additives as worthless without making a spectacular exception for *AD-X2*.

Testimonials, it may be noted, are not highly regarded by scientists or the law courts as evidence of performance, because they may be just the offhand reaction of people unskilled in close observation, and they are not based on any controlled comparisons by experts trained in the methods of science. Even as an advertising technique they are regarded as having their limitations, for at a recent advertising convention a marketing expert pointed out that a high proportion of women have developed a negative reaction to endorsements by Hollywood personalities because of the feeling that such endorsements were secured for cash.

The controversy came to consumers' attention on a national scale in the Science section of Newsweek, December 11, 1950, in which the magazine's science editor viewed with sympathy Mr. Ritchie's efforts in challenging the Bureau of Standards' experts and quoted some of the testimonials of satisfied users of *AD-X2*. The article was reprinted and widely circulated by Pioneers, Inc., and another writer in a publicity job for the firm told how the Newsweek science editor had spent four days with Mr. Ritchie at Oakland, Calif., in order to obtain information for the story. Just why such an excursion was necessary is not clear, since what appeared in Newsweek could have been written from the ample publicity material circulated by Mr. Ritchie.

Many informed readers of Newsweek, particularly those with some scientific training, were mildly surprised at the enthusiastic editorial promotion given the product, but put it down as one of those occasions when a publicity man has been successful in placing a story with a not-too-critical editor.

The discovery of a "new" battery "rejuvenator," however, did not attract wide attention in other reputable news journals, and it was not until December 1952 that *AD-X2* again achieved nation-wide publicity. On December 18, 1952, the Senate Small Business Committee issued a voluminous press release defending and extolling Mr. Ritchie's product; this release was given considerable space in a number of journals, including The Wall Street Journal. That paper's Washington bureau apparently sided wholeheartedly with Mr. Ritchie, and the Senate Small Business Committee's attempt to aid him in his fight against the Bureau, for its headline on the story was "Government's Tests called Dead Wrong on Battery Life Saver." The first paragraphs read:

"A story of how the National Bureau of Standards and other Government agencies have refused for years to recognize the merits of an important product for prolonging the life of lead storage batteries was unfolded by the Senate Small Business Committee.

"The committee released an exhaustive report on the merits of the product — a battery additive known commercially as Battery AD-X2 — written by scientists of the Massachusetts Institute of Technology.

"Among the report's conclusions:

" 'A substantial saving in battery costs could be achieved by the universal use of Battery AD-X2 in batteries. . . .' "

CR's characterization of the M.I.T. report was briefly given in last month's editorial and sent to every member of the Congress. M.I.T.'s report was *not* "exhaustive"; it did not show that a substantial saving in battery costs could be achieved by the universal use of *Battery AD-X2*; indeed, the report plainly indicated that it did not purport to deal with the effect of *AD-X2* on automobile storage batteries under conditions of normal use.

The Wall Street Journal's story editorialized with such phrases as "To the further dismay of Mr. Ritchie and his company, the bureau [National Bureau of Standards] has sometimes privately advised people that AD-X2 is no good." "To add to the sorry tale, independent tests of AD-X2 were made by the Army Signal Corps, Chief of Ordnance, and the Navy's Bureau of Ships. All of them flatly stated that their results indicate no improvement from use of Battery AD-X2."

This blunt attack on the Bureau caused a number of people to sit up and take notice of the fact that there was more in this picture than the customary high pressure sales claims for a product. It was a challenge to the technical competence of the National Bureau of Standards in a

field in which it had been functioning for more than 25 years with its test work carried on by the recognized top scientists in the field.

Newsweek again took up the cudgels for Mr. Ritchie and indicated that it considered the National Bureau of Standards on "an embarrassing spot." It reported that "Early this year [1952] Ritchie decided to plunge. He left his business and camped in Washington, prepared to spend all his time and money to get what he considered a fair test of Battery AD-X2. With the help of a few scientists who had studied his product and found it effective, he finally got the small-business committee interested in his case .... The M.I.T. research team, headed by chemical engineering professor Harold C. Weber, physical chemistry professor James A. Beattie, and mathematics professor George P. Wadsworth, and coordinated by the president of the Institute, Dr. James R. Killian, found that Battery AD-X2 was effective and could be added to *all* automobile and industrial lead-acid storage batteries to increase their life. [emphasis ours]

"In addition to the M.I.T. report, the Senate committee released a summary of the situation prepared by chemistry professor Keith J. Laidler of the Catholic University of America. This analysis accused the NBS scientists of haphazard experimental procedures and faulty interpretation of the results."

Last month we reported our early difficulties in obtaining the basic documents that provided the basis for the Small Business Committee's attack on the Bureau. The Committee's release was issued with no hearings, no testimony, and, when CR's representatives, with the aid of helpful members of Congress, finally arranged to pay a visit to the Committee's headquarters, only the M.I.T. report was available. As we have previously noted, this report did not substantiate the product's advertising claims, did not contradict the National Bureau of Standards test findings, and did not even purport to show effects, favorable or otherwise, of *AD-X2* on automobile storage batteries *under conditions of actual use.*

In the meantime, the National Bureau of Standards presented the results of detailed tests of battery additive *AD-X2* in response to a request from the Post Office Department in connection with fraud order proceedings. The fraud order issued on February 24, 1953, was immediately suspended, at the request of Secretary of Commerce Sinclair Weeks. The Bureau of Standards, in connection with its study for the Post Office Department and the Senate Small Business Committee, issued a detailed summary of its findings entitled "Statement on Battery Additives."

The only journal that we know of that found this study newsworthy was Chemical and Engineering News, which in its issue of February 23, 1953, ran a summary of the National Bureau of Standards' statement which gave a careful evaluation of the M.I.T. report, answering it point by point and noting that the M.I.T. results were not necessarily in conflict with the Bureau's findings. Apparently it was not considered of interest to readers of Newsweek and The Wall Street Journal to learn that the Bureau of Standards had issued a study on a particular product by brand name — a most unusual deviation from the Bureau's custom — that showed the product to be without any beneficial action on normal storage battery operation. On March 8, 1953, an inspired story by Edwin L. Dale, Jr., appeared in the New York Herald Tribune that hinted darkly of investigations backed by Secretary of Commerce Sinclair Weeks and Postmaster General Arthur E. Summerfield that might uncover a major scandal in the Bureau of Standards and other government testing agencies. Involved, it was said, were products such as sparkplugs, safety glass, photographic development solutions, and battery compounds which had been "rejected." Mr. Dale wrote hopefully: "Some of the rejected products, if the inventors' claims are true, promise sensational results." The *AD-X2* case, according to this news story, was typical of the manner in which "good" products were being treated by government bureaucrats.

So little heed did Secretary of Commerce Sinclair Weeks give to the studies of the Bureau of Standards on *AD-X2* that, in a press statement dated March 31, 1953, he announced he was going to withdraw all Bureau of Standards' circulars dealing with battery additives until such time as new tests could be completed to test *AD-X2* in every conceivable way, on the ground "that the National Bureau of Standards has not been sufficiently objective, because they discount entirely the play of the market place...." He also pointed out "I cannot bring myself to believe that the people making AD-X2 have the intent to defraud — and without intent, I do not see how there can be fraud." Aside from his lack of knowledge of the Bureau of Standards' extensive tests on *AD-X2*, Mr. Weeks might at least have submitted his press statement to legal advisers employed at taxpayers' expense in his department who could have informed him that he was on doubtful legal grounds in his discussion of misrepresented products. That aspect, however, is a matter for the

legal profession to deal with, and they doubtless will discuss it in their journals.

In his eagerness to protect the little businessman against overzealous bureaucrats, Mr. Weeks "accepted" the resignation of Dr. Allen V. Astin as Director of the National Bureau of Standards because the Bureau's handling of the battery additive had not been "sufficiently objective." In the storm of protest that arose over the action, some very interesting revelations came to light through the able work of reporters on several Washington newspapers.

In an early interview after Dr. Astin's resignation was made public, Jess M. Ritchie, manufacturer of *AD-X2*, was photographed saying that his victory over the Bureau of Standards was "a very good thing."

The U.S. Department of Commerce, through an official referred to as "the department's top press agent," gave out a list of names of persons who were alleged to have tried out *AD-X2* and found it valuable. When the reporter tried to run down the names on the list, he could report only that two members of the staff of the Senate Small Business Committee who had received free samples were willing to say that it had helped their auto batteries.

One newspaper brought out the fact that Dr. Keith J. Laidler who prepared the press release for the Small Business Committee had been employed as a consultant by Mr. Ritchie for which he had received something like $1337 and had become scientific consultant to the Senate Small Business Committee without compensation. Indeed, he was reported to have prepared a 9-page report in the spring of 1952 for Mr. Ritchie, copyrighted by Pioneers, Inc., that glowingly paid tribute to the product. One member of the Senate Small Business Committee's professional staff, however, explained that Dr. Laidler refunded the money received from Pioneers, Inc., "in order that his objectivity as a Senate committee consultant could not be questioned." In a later newspaper interview, Mr. Ritchie claimed that the money had been returned to Dr. Laidler and that Laidler had been paid an additional $340.

It also turned out that Jess M. Ritchie was a self-made man with a sixth-grade education and a "doctorate in psychology" from the "College of Universal Truth." This institution of learning was discussed in an article in Collier's Magazine some time ago as located in a dingily-furnished three-room office in Chicago, from which one of the authors of the article, Sidney J. Robbins, had bought himself a "Doctorate of Psychology in Metaphysics" for $110, four days after entering negotiations.

The uproar occasioned by Secretary Weeks' desire to do right by a little businessman at the expense of the integrity of scientific testing and service to the consumer-taxpayer rendered by the National Bureau of Standards has been so overwhelming that the Secretary, to save face, has called in two groups of scientists for investigation and report — on the problem he himself created at the Bureau! The forced resignation of the Director, Dr. A. V. Astin, is to take effect some time after their reports are in. One committee, under the chairmanship of Dr. M. J. Kelly, President of Bell Telephone Laboratories, will evaluate the functions and operations of the National Bureau of Standards "in relation to present national needs." Another committee appointed by Dr. Detlov W. Bronk, President of the National Academy of Sciences, will appraise the quality of the Bureau's work with relation to battery additives, including the tests made on *AD-X2*.

In an age when science has received lip service from public officials of all ranks, and from writers in newspapers, and magazines, and when the federal government has gone to great lengths to impress the electorate with the contributions made by science to national defense and to the improvement of the American standard of living, the support given a salesman for a product that might be in a class with a medical placebo is inexplicable. Reputable weekly news journals, a great educational and research institution, men of some professional standing with good scientific training, elected representatives of the people, as well as appointed officials, have all lent themselves to this effort to challenge the standing and prestige of the nation's leading physical, chemical, and engineering research institution, the National Bureau of Standards. Whether scientific societies are finally able to unravel the tangled web the Small Business Committee and Secretary Weeks have woven, and to present the many facets of the picture so that it can be comprehended by the average citizen is a challenge; if it can be done, it will be an achievement that may require so long in the telling that there will be few who can follow it through to the ultimate conclusion and meaning. It *should* be a topic for graduate theses in government and governmental administration for years to come.

Ratings of Motion Pictures

THIS section aims to give critical consumers a digest of opinion from a wide range of motion picture reviews, including the motion picture trade press, leading newspapers and magazines — some 19 different periodicals in all. The motion picture ratings which follow thus do not represent the judgment of a single person, but are based on an analysis of critics' reviews.

The sources of the reviews are:

Box Office, Cue, Daily News (N.Y.), *The Exhibitor, Harrison's Reports, Joint Estimates of Current Motion Pictures, Motion Picture Herald, National Legion of Decency, Newsweek, New York Herald Tribune, New York Times, New York World-Telegram & Sun, Parents' Magazine, Release of the D.A.R. Preview Committee, Reviews and Ratings* by the Protestant Motion Picture Council, *Time, Times Herald* (Washington, D.C.), *Variety* (weekly), *Weekly Guide to Selected Motion Pictures* (National Board of Review of Motion Pictures, Inc.).

The figures preceding the title of the picture indicate the number of critics who have been judged to rate the film A (recommended), B (intermediate), or C (not recommended) on its entertainment values.

Audience suitability is indicated by "A" for adults, "Y" for young people (14-18), and "C" for children, at the end of each line.

Descriptive abbreviations are as follows:

adv—adventure
biog—biography
c—in color (Technicolor, Cinecolor, Trucolor, Magnacolor, Vitacolor, etc.)
car—cartoon
com—comedy
cri—crime and capture of criminals
doc—documentary
dr—drama
fan—fantasy
hist—founded on historical incident
mel—melodrama
mus—musical
mys—mystery
nov—dramatization of a novel
rom—romance
sci—science fiction
soc—social-problem drama
trav—travelogue
war—dealing with the lives of people in wartime
wes—western

A	B	C		
—	7	1	**Abbott and Costello Go to Mars**	*com A*
—	8	3	**Abbott and Costello Meet Captain Kidd**	*mus-com-c AYC*
5	8	2	**Above and Beyond**	*war-dr AY*
—	4	11	**Against All Flags**	*adv-c AY*
1	3	1	**Alaskan Eskimo, The**	*doc-c AYC*
—	6	6	**All Ashore**	*mus-com-c A*
—	1	3	**Ambush at Tomahawk Gap**	*mel-c A*
—	8	10	**Androcles and the Lion**	*com A*
—	2	10	**Angel Face**	*cri-mel A*
—	2	4	**Angel Street (British)**	*dr A*
1	5	9	**April in Paris**	*mus-com-c A*
—	—	5	**Army Bound**	*mel AYC*
—	—	10	**Babes in Bagdad**	*adv-c A*
5	8	3	**Bad and the Beautiful, The**	*dr A*
—	2	6	**Bandits of Corsica, The**	*adv A*
—	6	7	**Battle Circus**	*war-mel A*
—	1	3	**Battles of Chief Pontiac**	*hist-mel AYC*
1	4	—	**Bear Country**	*doc-c AYC*
—	3	7	**Berliner, The**	*fan A*
—	—	3	**Big Break, The**	*dr A*
—	—	6	**Big Frame, The**	*cri-mel A*
—	8	7	**Blackbeard, the Pirate**	*adv-c A*
—	13	3	**Bloodhounds of Broadway**	*mus-com-c A*
—	3	3	**Blue Canadian Rockies**	*wes-c AYC*
—	6	4	**Blue Gardenia, The**	*cri-mel A*
—	6	5	**Brave Don't Cry, The (British)**	*dr A*
9	6	1	**Breaking Through the Sound Barrier (British)**	*dr AY*
1	3	3	**Bright Road**	*dr AYC*
—	2	15	**Bwana Devil**	*mel-c A*
—	11	2	**By the Light of the Silvery Moon**	*mus-com-c AYC*
—	4	1	**Cairo Road (British)**	*mel A*
11	5	—	**Call Me Madam**	*mus-com-c AYC*
—	9	2	**Castle in the Air (British)**	*com AYC*
—	3	5	**Cattle Town**	*mus-wes AYC*
—	7	7	**City Beneath the Sea**	*mel-c A*
—	2	3	**Cliff of Sin, The (Italian)**	*dr A*
1	7	8	**Clown, The**	*dr A*
—	2	3	**Code Two**	*cri-mel AYC*
5	12	2	**Come Back, Little Sheba**	*dr A*
—	9	2	**Confidentially Connie**	*com AYC*
—	3	4	**Count the Hours**	*mel A*
—	3	2	**Cry of the Hunted**	*cri-mel A*
—	3	3	**Cupboard Was Bare, The (French)**	*com A*
1	4	5	**Curtain Up (British)**	*com A*
—	7	3	**Desert Legion**	*mel-c AYC*
—	6	3	**Desperate Search**	*mel A*
1	8	2	**Destination Gobi**	*war-dr-c AYC*
—	1	6	**Down Among the Sheltering Palms**	*mus-com-c A*
—	2	3	**Dream Wife**	*com A*
—	—	3	**Egypt by Three (Egyptian)**	*dr A*
—	15	2	**Face to Face**	*dr A*
—	2	3	**Fast Company**	*com A*
—	5	2	**Fear and Desire**	*war-dr A*
—	2	1	**5,000 Fingers of Dr. T, The**	*fan-c A*
—	6	5	**Flat Top**	*war-mel-c AYC*
4	7	1	**Forbidden Games (French)**	*war-dr A*
—	4	2	**Fort Vengeance**	*mel-c AYC*
—	—	5	**Gambler and the Lady (British)**	*cri-mel A*
—	2	3	**Girl Who Had Everything, The**	*dr A*
—	4	7	**Girls in the Night**	*cri-mel A*
—	7	2	**Girls of Pleasure Island, The**	*com-c A*
—	6	4	**Glass Wall, The**	*mel A*
—	5	1	**Glory at Sea**	*war-doc AYC*
—	—	4	**Gold Town Ghost Riders**	*wes AYC*
1	6	4	**Gunsmoke**	*wes-c AYC*
—	9	4	**Hangman's Knot**	*wes-c A*
5	11	1	**Hans Christian Anderson**	*mus-com-c AYC*
—	1	2	**Hell is Sold Out**	*dr A*
1	7	6	**Hiawatha**	*hist-dr-c AYC*
—	7	1	**Hitch Hiker, The**	*cri-mel A*
2	6	—	**Hoaxters, The**	*propaganda-doc AYC*
—	1	3	**Homesteaders, The**	*wes-c AYC*
1	5	2	**House of Wax, The**	*cri-mel-c A*
—	2	2	**I Believe in You (British)**	*mel A*
2	8	6	**I Confess**	*mys-mel A*
—	4	7	**I Don't Care Girl, The**	*mus-com-c A*
—	12	3	**I Love Melvin**	*mus-com-c AYC*
—	2	3	**I'll Get You (British)**	*mys-mel AY*
5	12	1	**Importance of Being Earnest, The (British)**	*com-c A*
—	5	1	**Invaders from Mars**	*sci-c AY*
—	4	8	**Invasion, U.S.A.**	*war-dr A*

A	B	C		
2	9	2	**It Grows on Trees**	*fan AYC*
—	4	1	**It Happens Every Thursday**	*com A*
—	5	5	**Jack McCall, Desperado**	*wes-c A*
—	4	2	**Jalopy**	*com AYC*
—	2	2	**Jamaica Run**	*adv-c A*
1	11	5	**Jazz Singer, The**	*mus-biog-c AYC*
—	11	5	**Jeopardy**	*mel A*
—	6	3	**Julius Caesar**	*dr AYC*
—	—	3	**Jungle Girl**	*adv AYC*
—	9	2	**Justice is Done (French)**	*cri-dr A*
—	8	7	**Kansas City Confidential**	*cri-mel A*
—	5	1	**Kansas Pacific**	*mel-c AYC*
—	5	4	**Lady Wants Mink, The**	*com-c AYC*
—	6	2	**Last of the Comanches**	*wes-c AYC*
—	5	—	**Law and Order**	*wes-c A*
—	7	2	**Lawless Breed, The**	*wes-c AYC*
1	7	4	**Leonardo da Vinci**	*doc-c AY*
—	6	3	**Life Begins Tomorrow (French)**	*dr A*
—	—	3	**Life of Donizetti, The (Italian)**	*mus-biog A*
5	8	1	**Lili**	*mus-com-c AYC*
—	7	4	**Little World of Don Camillo, The (French)**	*dr A*
—	5	2	**Lone Hand, The**	*wes-c AYC*
—	—	8	**Luxury Girls (Italian)**	*dr A*
—	6	3	**Ma and Pa Kettle on Vacation**	*com AYC*
—	3	3	**Magic Sword, The (Yugoslav)**	*fan AYC*
—	8	2	**Magnetic Monster, The**	*sci AYC*
—	2	7	**Man Behind the Gun, The**	*mus-mel-c AYC*
—	4	7	**Man in the Dark**	*mel A*
4	3	1	**Man on a Tightrope**	*dr A*
—	4	3	**Man with the Grey Glove, The (Italian)**	*mus-dr A*
—	3	4	**Marika (Viennese)**	*mus-com A*
—	4	3	**Marshal of Cedar Rock**	*wes AYC*
—	1	3	**Maverick, The**	*wes-c AYC*
—	10	2	**Meet Me at the Fair**	*mus-com-c AYC*
—	6	10	**Member of the Wedding, The**	*dr A*
1	15	2	**Million Dollar Mermaid**	*biog-c AYC*
—	6	10	**Mississippi Gambler, The**	*mel-c A*
—	1	6	**Monsoon**	*dr-c A*
—	3	8	**Montana Belle**	*mus-wes-c A*
—	1	3	**Montana Incident**	*wes AYC*
6	7	3	**Moulin Rouge**	*nov-c A*
—	—	6	**Mr. Walkie-Talkie**	*war-com AYC*
—	3	3	**Murder Will Out (British)**	*mys-mel A*
2	11	4	**My Cousin Rachel**	*nov A*
1	7	1	**My Pal Gus**	*com A*
4	8	3	**Naked Spur, The**	*wes-c A*
—	3	1	**Naughty Martine**	*com A*
1	2	2	**Never Let Me Go**	*mel A*
1	7	4	**Never Wave at a WAC**	*com A*
1	13	3	**Niagara**	*mel-c A*
—	2	2	**No Holds Barred**	*com A*
—	9	9	**No Time for Flowers**	*mys-mel A*
—	1	2	**Of Love and Bandits (Italian)**	*mel A*
1	12	2	**Off Limits**	*com AYC*
—	4	4	**Old Overland Trail**	*mus-wes AYC*
—	3	3	**On Top of Old Smoky**	*mus-wes-c AYC*
—	2	8	**One Girl's Confession**	*mel A*
—	7	8	**Outpost in Malaya**	*mel A*
—	6	2	**Pathfinder, The**	*nov-c AYC*
—	10	1	**Penny Princess (British)**	*com-c A*
7	8	1	**Peter Pan**	*car-fan-c AYC*
—	2	3	**Pimpernel Svensson (Swedish)**	*com AYC*
—	4	2	**Pony Express**	*wes-c A*
1	8	6	**Pony Soldier**	*war-mel-c AY*
—	—	9	**Port Sinister**	*mel A*
3	4	2	**President's Lady, The**	*hist-dr A*
—	2	7	**Prince of Pirates**	*adv-c A*
—	—	9	**Problem Girls**	*soc-dr A*
—	2	4	**Ramuntcho (French)**	*dr A*
—	9	7	**Redhead from Wyoming, The**	*wes-c A*
—	7	2	**Ride the Man Down**	*wes-c A*
4	10	2	**Road to Bali**	*mus-com-c AYC*
—	4	4	**Rogue's March**	*dr AYC*
—	5	11	**Ruby Gentry**	*dr A*
2	4	8	**Salome**	*dr-c A*
—	2	4	**San Antone**	*wes A*
—	1	7	**Savage Mutiny**	*mel AYC*
1	3	—	**Scared Stiff**	*com AYC*
—	—	4	**Scotland Yard Inspector (British)**	*cri-mel A*
1	4	—	**Sea Around Us, The**	*doc-c AYC*
1	6	4	**Seminole**	*mel-c A*
—	1	3	**Serpent of the Nile**	*adv-c A*
—	1	4	**Sextette (French)**	*dr A*
4	2	—	**Shane**	*wes-c AY*
—	11	5	**She's Back on Broadway**	*mus-com-c AY*
2	6	1	**Silver Whip, The**	*wes AYC*
—	5	3	**Skipper Next to God (French)**	*mel A*
—	5	4	**Sky Full of Moon**	*wes-c A*
1	5	2	**Small Town Girl**	*mus-com-c AYC*
1	1	6	**Sombrero**	*mus-dr-c A*
—	—	5	**Son of the Renegade**	*wes AYC*
—	6	3	**South Pacific Trail**	*mus-wes AYC*
—	6	—	**Split Second**	*mys-mel A*
2	7	4	**Star, The**	*dr A*
1	3	2	**Star of Texas**	*wes AY*
5	12	1	**Stars and Stripes Forever**	*mus-biog-c AYC*
—	9	4	**Stars are Singing, The**	*mus-com-c AYC*
—	3	—	**Stolen Identity (Austrian)**	*cri-mel A*
—	8	8	**Stop, You're Killing Me**	*mus-com-c A*
4	9	2	**Story of Mandy, The (British)**	*dr A*
1	11	4	**Story of Three Loves, The**	*dr-c A*
—	—	3	**Streets of Sorrow (Italian)**	*dr A*
—	1	8	**Sword of Venus**	*adv A*
—	3	6	**System, The**	*cri-mel A*
—	6	7	**Tall Texan, The**	*wes A*
—	—	6	**Tangier Incident**	*mys-mel AYC*
—	6	4	**Target Hong Kong**	*mel A*
1	9	6	**Taxi**	*com AYC*
—	6	9	**Thief of Venice, The (Italian)**	*adv A*
—	1	4	**Thirst of Men, The (French)**	*dr A*
—	3	3	**Three Dimension**	*doc-c AYC*
—	1	11	**Thunder in the East**	*mel A*
—	5	6	**Thunderbirds**	*war-dr AYC*
1	3	1	**Titanic**	*dr A*
7	7	3	**Tonight We Sing**	*mus-biog-c AYC*
—	2	5	**Topaze (French)**	*com A*
—	6	4	**Torpedo Alley**	*war-mel A*
—	7	2	**Treasure of the Golden Condor**	*adv-c AYC*
—	1	5	**Triorama**	*doc-c AYC*
—	1	5	**Tromba, the Tiger Man (German)**	*mel AYC*
—	7	3	**Tropic Zone**	*mel-c A*
1	6	2	**Trouble Along the Way**	*com A*
3	8	2	**Two Cents' Worth of Hope (Italian)**	*dr A*
1	6	3	**Under the Paris Sky (French)**	*dr A*
—	1	10	**Voodoo Tiger**	*adv-c A*
2	4	1	**War of the Worlds, The**	*sci-c AYC*
—	5	3	**Wherever She Goes (Australian)**	*mus-dr AYC*
—	2	3	**White Lightning**	*dr A*
—	8	5	**White Line, The (Italian)**	*propaganda-dr A*
—	1	2	**Wide Boy (British)**	*cri-mel A*
—	5	3	**Winning of the West**	*wes-c AYC*
—	2	3	**Woman They Almost Lynched, The**	*mus-mel A*
—	1	3	**Young Chopin (Polish)**	*mus-biog A*
—	2	5	**Young Wives' Tale (British)**	*com A*

The Consumers' Observation Post

(*Continued from page 4*)

the housewife refuses to buy and now owns something like 130 million pounds, enough to supply the whole United States for five months at last year's rate of consumption. Even after unloading some of the butter in the school lunch program, the federal government will have a surplus that it does not know what to do with. Truly a Humpty-Dumpty state of economics prevails in our national farm policies!

* * *

FROZEN FOODS in wide variety are becoming increasingly popular. Furthermore, they are often a bargain. The Wall Street Journal reported in March, for example, that frozen orange juice has been selling in certain large cities at two 6-oz. cans for 25 cents, compared with 17 cents a can charged last fall, 24 cents in 1951. Frozen peas were selling for less than the canned variety in some sections, with frozen broccoli and cauliflower used as loss leaders in some stores. Stiff competition among new firms getting into the frozen food business is given credit for the record low price levels on frozen fruits and vegetables. Although some sections of the trade complain bitterly of "slam-bang competition," the American consumer can be well pleased at the prospect that this price situation is expected to continue for some time to come.

* * *

TOOTHPASTE AND TOOTH POWDER containing "dichlorophene" has been found to cause severe allergic irritation. In a report to the Journal of the American Medical Association, Dr. A. A. Fisher and Dr. Louis Tobin of Mount Vernon, N.Y., outline the details of nine cases that they have studied in which the patients were sensitive to this compound (also known as G-4, dihydroxydichlorodiphenylmethane) which was contained in a popular ammoni-

ated toothpaste (brand name not given). Reactions included dryness and scaliness of the lips, red and swollen tongue, and inflammation of the mouth. The difficulties cleared up when the patients discontinued use of the particular toothpaste involved.

* * *

PURE WHITE SOAP is now on its way out, and good riddance, is the way an English trade journal feels about it. Originally the idea was to suggest purity by the whiteness, comments Soap & Sanitary Chemicals. Now, it appears, white soap cannot be perfumed with many of the new odors, and the manufacturers are sorry they thought of the white-soap idea in the first place. The soap journal mentions approvingly the French soaps of yesteryear which sold at fabulous prices in tan, pink, blue, but never white. The new development in soap, however, is not color, but the addition of a new antiseptic. Dial soap has been on the market for several years with the bacteriostat hexachlorophene (trade name, G-11) that is known to have some value as a body deodorant. Now another new chemical with similar properties is being marketed. Called Actamer, it is reported to be used in Fresh soap, Marvelous Shampoo, and Dainty soap. Neither G-11 or Actamer can be used in a pure white soap, according to Chemical Week.

* * *

LOG CABINS built for summer homes and recreation purposes in the woods need special care to prevent decay from setting in at an early date. Some excellent advice on simple precautions to take will be found in the pamphlet Making Log Cabins Endure, No. R982, put out by Forest Products Laboratory, U.S.D.A. Forest Service, Forest Products Laboratory, Madison 5, Wis. How to lay the foundation properly to prevent early rotting, practical methods of chinking, what interior and exterior finishes to use are all discussed in practical fashion. The Laboratory has found that the sealer type of finish is preferable to the type that merely forms a continuous film on the surface of the wood, for such sealers are designed to penetrate slightly into the wood and to seal it near the surface. In applying them, the best method is to remove all excess sealer by wiping before it gets too tacky. Two coats using the wiping method each time are considered more effective than one, and the pigmented sealers have been found to be slightly more durable than the clear or unpigmented sealers. These comments on finishes for log cabins may also have their application to the new varnish finishes on small suburban homes.

Phonograph Records

BY WALTER F. GRUENINGER

Although nearly all new LP's of serious music are heard, space generally narrows comment to recommended items.

Alfven: *Swedish Rhapsody* & **Grieg:** *Peer Gynt Suite No. 1 — Anitra's Dance* and *In the Hall of the Mountain King*. Philadelphia Orchestra under Ormandy. Columbia. $2.50. Fine performances of Alfven's folk-like, atmospheric, relatively unknown piece (until it hit TV's Omnibus program). Also two popular Grieg incidental pieces.

Beethoven: *Piano Concerto No. 5* ("Emperor"). Gieseking with the Philharmonia Orchestra under von Karajan. Columbia. $5.45. One of the finest piano concertos ever written—a *must* for a classical record library. Gieseking plays it deftly, with intelligence but without the massive strokes often thought to characterize the music. Strong orchestral support.

Beethoven: *Quartets, Op. 18, Nos. 1 and 2*. Paganini Quartet. RCA Victor. $5.72. Early Beethoven quartets, standard repertoire. Very well played.

Brahms: *Symphony No. 2*. NBC Symphony Orchestra under Toscanini. RCA Victor. $5.72. Brahms' most obviously melodic symphony. Expert performance.

Chopin: *Mazurkas*. Novaes (piano). Vox. $5.95. There's a wide variety of mood in these popular mazurkas and Madam Novaes' delicate touch and poetic playing misses none of them.

Dohnanyi: *Ruralia Hungarica* & **Kodaly:** *Hary Janos Suite*. Philharmonia Orchestra under Schuechter. MGM. $4.85. Colorful Hungarian music. Very well played.

MacDowell: *Piano Concerti Nos. 1 and 2*. Vivian Rivkin with the Orchestra of the Vienna State Opera under Dixon. Westminster. $5.95. The *Second Concerto* has been recorded twice, in recent years, but the *First* is rarely heard. Excellent performance.

Mascagni: *Cavalleria Rusticana*. Harshaw, Miller, Tucker, Guarrera, Votipka, etc., under Cleva and *Four Verdi Overtures*. Orchestra of the Met under Cleva. Columbia. $10.90. Operatic masterpiece well suited for recording. Columbia has achieved depth, height, and warmth in its recording, though the echo chamber effect of the opening aria (sung offstage) doesn't quite come off. The direction is dramatic, forceful. But the singing doesn't measure up to it. Thelma Votipka as Lucia comes over poorly. Margaret Harshaw as Santuzza is best. Richard Tucker as Turiddu overdoes the shouting and sobbing.

Mendelssohn: *Symphony No. 3* ("Scotch"). Pittsburgh Symphony Orchestra under Steinberg. Capitol. $5.72. The best record Capitol has produced with the Pittsburgh Symphony — highly recommended playing and recording.

Mozart: *Violin Concerto No. 4*. Gerard Poulet (violin) with the Austrian Symphony Orchestra under Gaston Poulet and Overtures to *Don Giovanni, Die Entfuhrung aus dem Serail, La Clemenza di Tito*. Austrian Symphony Orchestra under Koslik. Remington. $2.49. Young Gerard Poulet, featured performer in the high spirited, witty concerto masterpiece turns in the best playing I have yet heard from him. The overtures demand more verve and brilliance than they get here.

Smetana: *The Bartered Bride*. Musilova, Kovar, etc., with the Chorus and Orchestra of the Prague National Theatre under Vogel. Urania. $18.85. Lively, sensitive performance of this folk opera which is almost like a superior operetta. Most of the voices are first rate but Kalas as Kecal (character role) falls a trifle short in his singing. Musilova (title role) is top notch.

Strauss, J.: *Overtures to Die Fledermaus* and *The Gypsy Baron*. RIAS Symphony Orchestra under Fricsay. Decca. $2.50. Famous light overtures played robustly.

Strauss, R.: *Tod und Verklärung* and *Don Juan*. Philharmonic-Symphony Orchestra of N.Y. under Walter. Columbia. $5.45. Two of Strauss' most frequently played tone poems — highly dramatic works. The palm goes to the playing and recording of *Don Juan* which on both counts is superior to its companion.

Wagner: *Götterdämmerung—Siegfried's Rhine Journey* and *Funeral Music* and *Tristan und Isolde—Prelude und Liebestod*. Pittsburgh Symphony Orchestra under Steinberg. Capitol. $5.72. Highspots in the Wagnerian orchestral repertory. Some passages of *Götterdämmerung* sound pale alongside of Toscanini's recording but the side stands up in other comparisons and *Tristan* is quite satisfactory.

Martyn Green's Gilbert and Sullivan. Columbia. $5.45. The most renowned G & S performer of our time sings 16 songs. His voice is acceptable but his style and diction are superb.

* * *

MUSICAL MASTERWORKS SOCIETY, Inc., 1733 Broadway, New York 19, has been selling 10-in. LP records by mail at $1.70 delivered ($1.50 each for 5 or more). The disks are unusually thin (probably plastic) and the surfaces are quiet. I have heard four: Bach's *Brandenburg Concerti Nos. 4* and *5*; Brahms' *Variations on a Theme by Haydn* and *Academic Festival Overture*; Mendelssohn's *Violin Concerto* with Louis Kaufman; Chopin's *Piano Concerto No. 2* with Mewton-Wood. The Mendelssohn and Chopin should have been pressed on a 12-in. disk for an uninterrupted performance. Kaufman is prosaic and he hurries. Mewton-Wood's disk is good, easily the best of the four. The fidelity of these European recordings is recommended. Overall, not equal to the best, but for those who don't choose to spend $5 or so, $1.70 buys a reasonably good disk — particularly the Chopin.

OTHER LP'S HIGHLY RECOMMENDED (for interpretation and for fidelity)

COLUMBIA — **Beethoven:** *Piano Sonatas Nos. 2* and *23* ("Appassionata"). Robert Casadesus. The dramatic *Appasstonata* alone is worth the price of the disk.
Delius: *Eventyr* and *North Country Sketches*. Royal Philharmonic Orchestra under Beecham. For the Delius enthusiast.
Vignettes for Violin. Isaac Stern. Seven melodious encore pieces by Kreisler, Dvorak, Mozart, etc.

ESOTERIC — *African Tribal Music and Dances*. Sonar Senghor and His Troupe. Drums, chants; educational value here.

MGM — **Schumann:** *Die Davidsbündler Tänze*. Joseph Battista (piano). Lesser Schumann.

VOX — **Handel:** *Four Sonatas for Recorder* and *Continuo*. Mann, Reimann, Elsner. Interesting music. Particularly exciting to recorder players.

WESTMINSTER — **Schubert:** *Trio No. 1*. Fournier, Janigro, Badura-Skoda (violin, cello, piano). Heavenly music — a great work.